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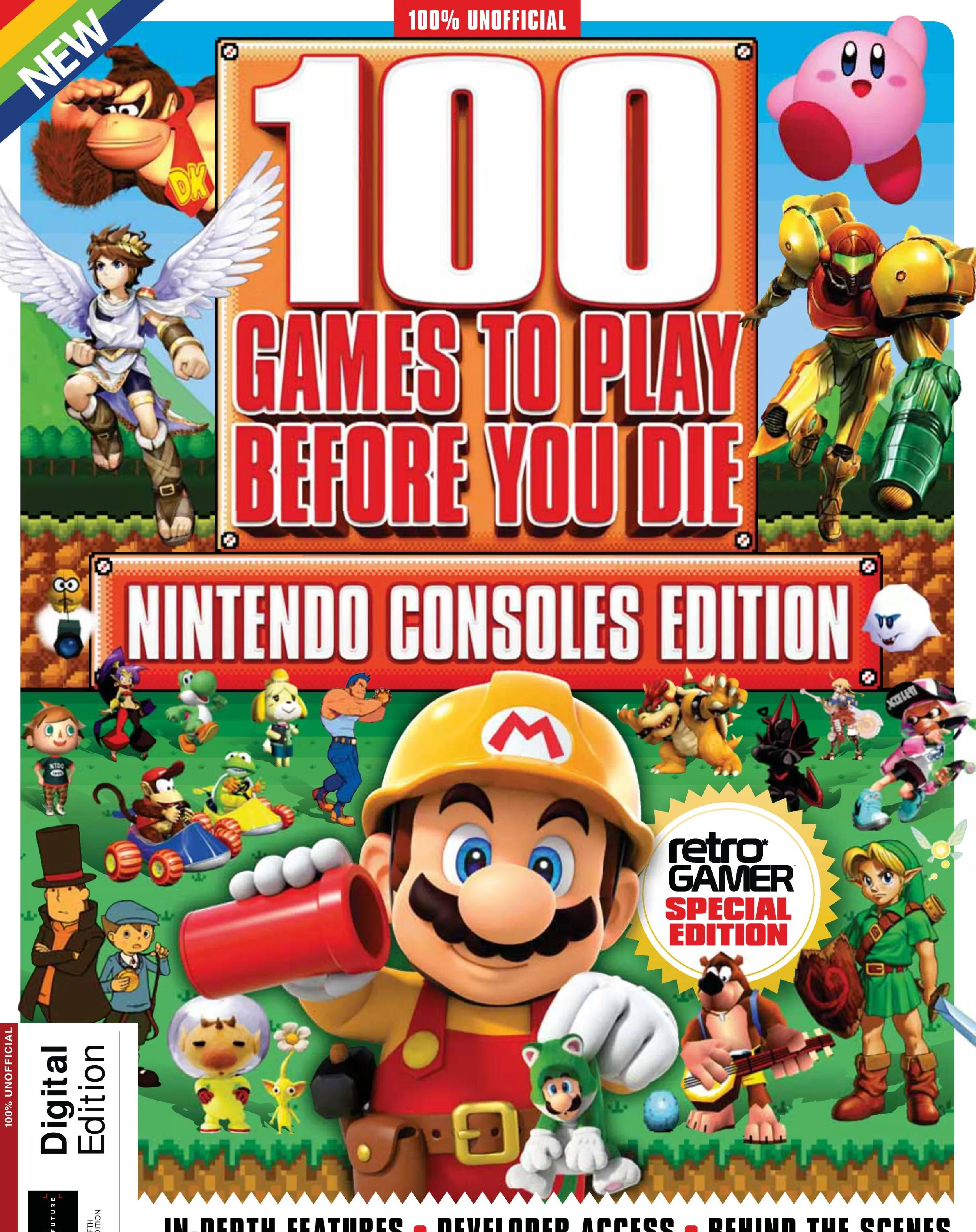
100 GAMES TO PLAY BEFORE YOU DIE

NINTENDO CONSOLES EDITION



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100 GAMES TO PLAY BEFORE YOU DIE

NINTENDO CONSOLES EDITION

There's a reason why Nintendo is still going strong today – it has made some of the greatest videogames of all time, from *Super Mario World* to *The Legend Of Zelda: Breath Of The Wild*. Over the years, Nintendo has created a variety of different games systems, from the NES and Game Boy to the Wii U and Switch, and those consoles have allowed gamers of all ages to enjoy a staggering variety of games. Of course, it's not just Nintendo who make amazing games for Nintendo consoles, and the following book is a testament to that. The **Retro Gamer** team has painstakingly looked at the many great games to have appeared on Nintendo hardware over the years, and put together a definitive list of 100 games that you really must experience. Additionally, we've scoured our archives to deliver fantastic in-depth articles on a large number of the featured games. If you loved playing Nintendo while you were growing up, or have only just discovered the company's consoles, you'll find this book to be an essential guide. Now excuse us – we're off to play *Breath Of The Wild*...

FUTURE

100
GAMES TO PLAY BEFORE YOU DIE
NINTENDO CONSOLES EDITION

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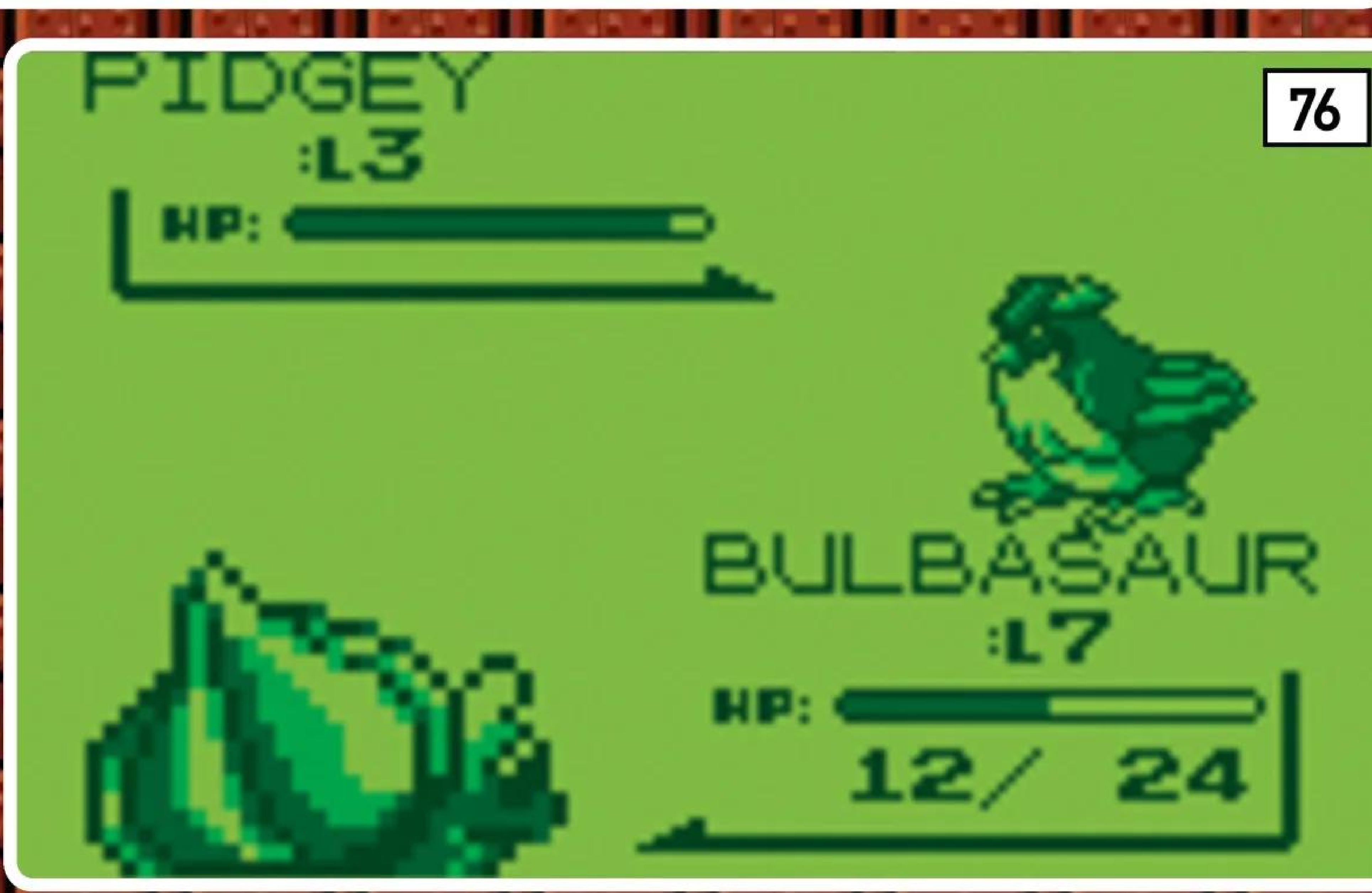
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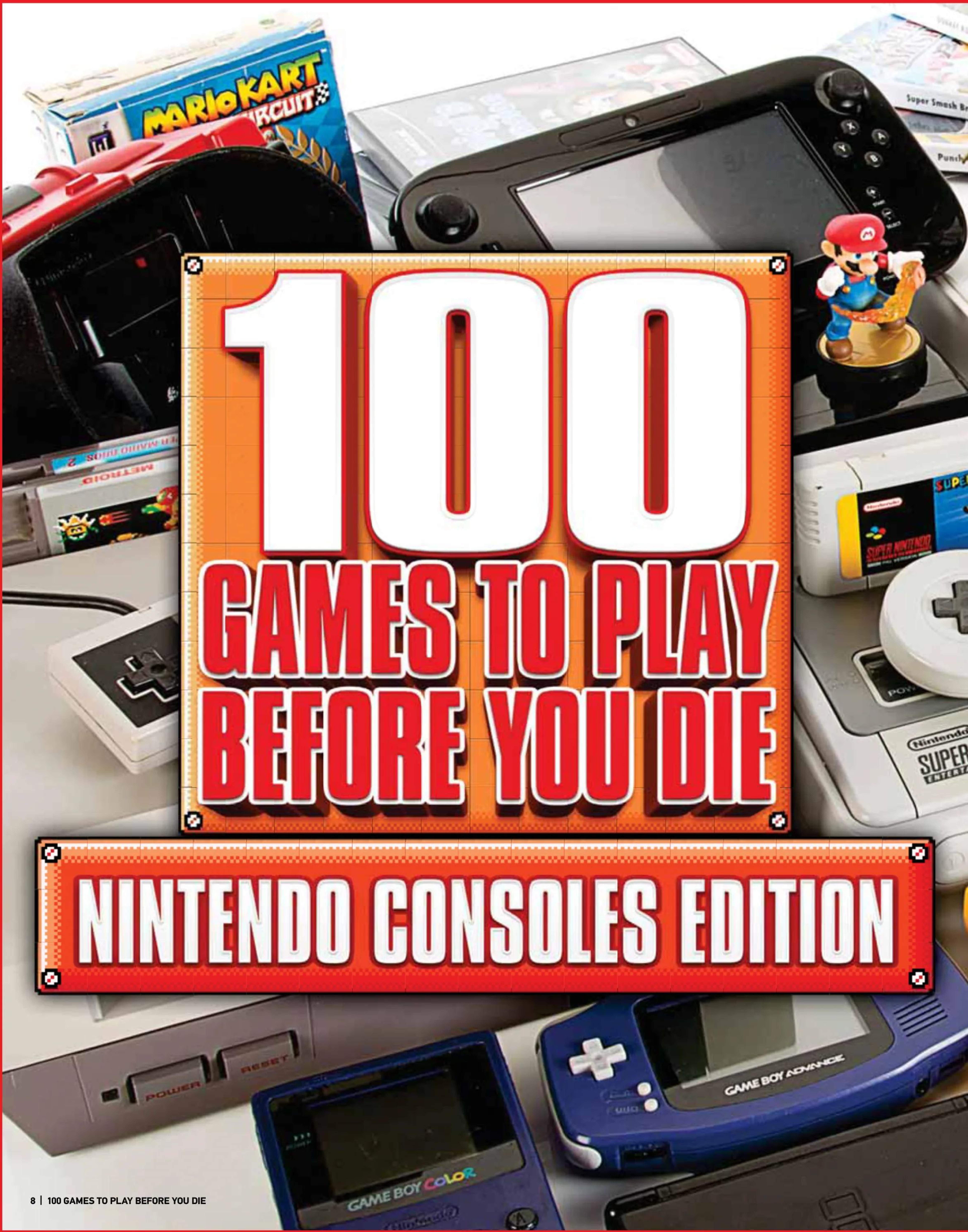


100 GAMES TO PLAY BEFORE YOU DIE

NINTENDO CONSOLES EDITION

MARIO KART CIRCUIT
METROID
Super Smash Br
Punch
SUPER NINTENDO
Nintendo
SUPER
POWER
RESET
GAME BOY ADVANCE
GAME BOY COLOR

100 GAMES TO PLAY BEFORE YOU DIE

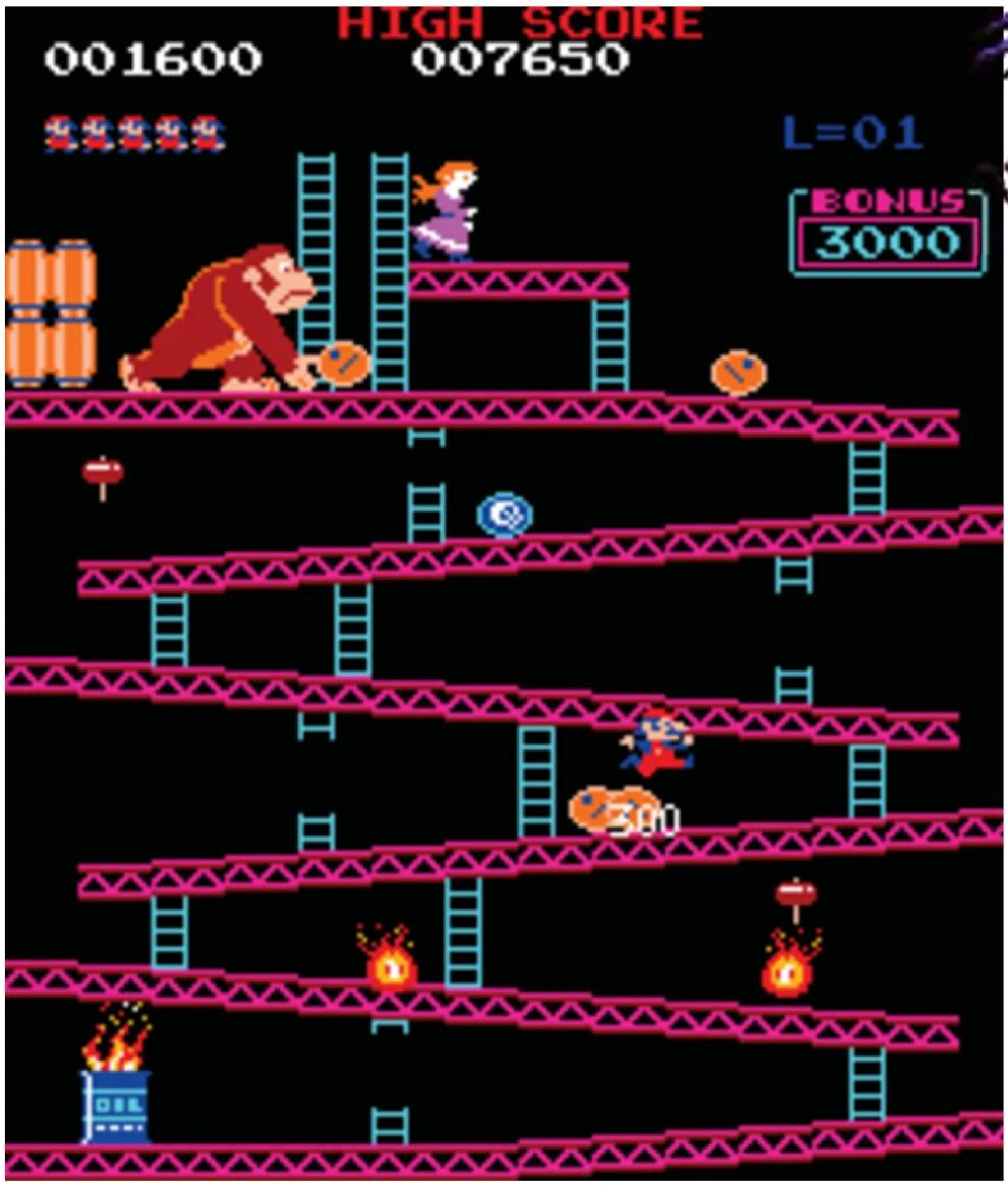
Some of the world's greatest games can be found on Nintendo consoles. Join us as we look at 100 classics that you really don't want to miss out on

Nintendo wasn't the first company to enter the console market, but it arguably left one of the biggest impressions. The Nintendo Entertainment System (known as the Famicom in Japan) became a huge hit in the United States, and helped to turn around interest in videogames after the big crash of the early Eighties. It went on to sell over 61 million units and established Nintendo as one of the industry's key players. The Game Boy arrived in 1989, and while it featured a monochrome screen, its large battery life and varied library of games saw it easily beat off competition from colour systems like the Lynx and Game Gear. It would become so popular that it spawned numerous revisions and follow-up consoles, including the Game Boy Advance, which in turn paved the way for the DS, 3DS and Nintendo's current system, the hybrid Switch.

The NES was followed up by the aptly named Super NES in 1990. The 16-bit console ended up winning the console battle against Sega's Mega Drive, and is continually referred to by gamers as one of the greatest games machines of all time. Interestingly, however, the SNES did not sell as many units as its predecessor, and the Nintendo 64 also showed diminishing returns, despite being a fantastic system with a range of incredible games that included *The Legend Of Zelda: Ocarina Of Time*, *Super Mario 64* and *GoldenEye 007*. Then, Sony's hipper PlayStation entered the market, and it began to loosen the stranglehold that Nintendo had held on the market for so long.

This continued with the GameCube, a fantastic little device that boasted some killer games and a bizarre little handle, which found itself competing with both the PlayStation 2 and Microsoft's Xbox. Nintendo's next system, the Wii, completely reinvigorated the company, and its unique controllers (shaped like remotes) and large amount of licensed games led to it selling over 100 million units. Sadly, its predecessor, the Wii U, managed to undo most of that good work, and while it featured some truly sensational games, it floundered badly, scraping just over 13 million sales in the five years it was on sale. Of course, that's still much higher than Nintendo's biggest console flop, the Virtual Boy – which didn't manage to break the million barrier – but it's a terrible figure for a Nintendo console. The company bounced back, however, and its latest system, the Switch, has become a major success, despite being nowhere near as powerful as its biggest rivals. Nintendo's decision to allow you to play games on the move or at home struck a chord with gamers the world over, and Nintendo has shipped over 36 million units since the console made its debut in 2017.

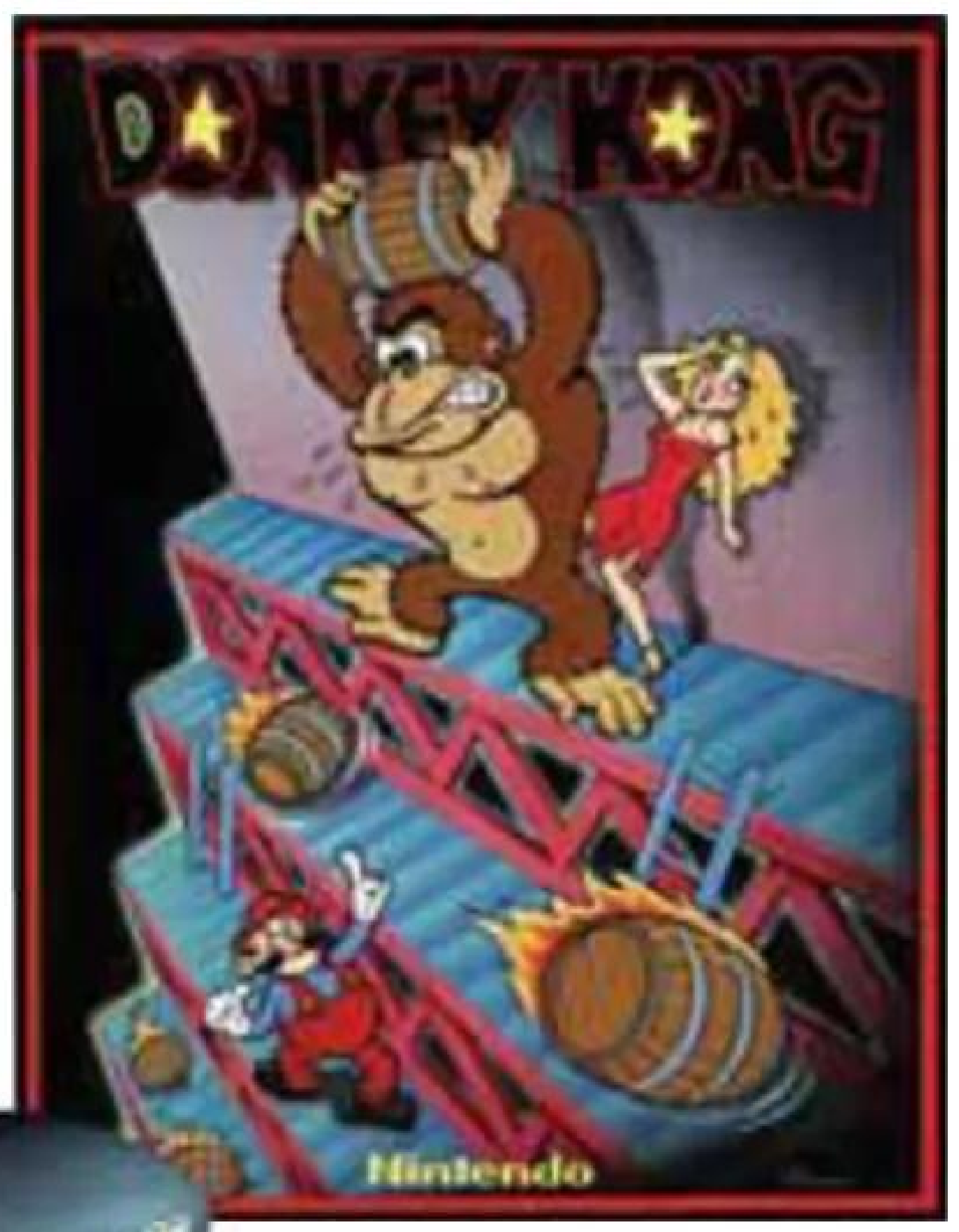
Now the history lesson is out of the way, let's look at what everyone really cares about, namely the games you can play on all of Nintendo's systems. In the interest of fairness we've divided the list up to cover any games you could play, meaning you'll see games from the likes of Rare, Konami and INIS, as well as Nintendo. We've also ensured that every system gets a chance to shine (yes, even the Virtual Boy), with a good range of games devoted to each console that Nintendo has released. So without further fanfare (and in no particular order), let's take a look at 100 of the best games you can play on Nintendo consoles. We hope you enjoy reading it as much as we did writing it.



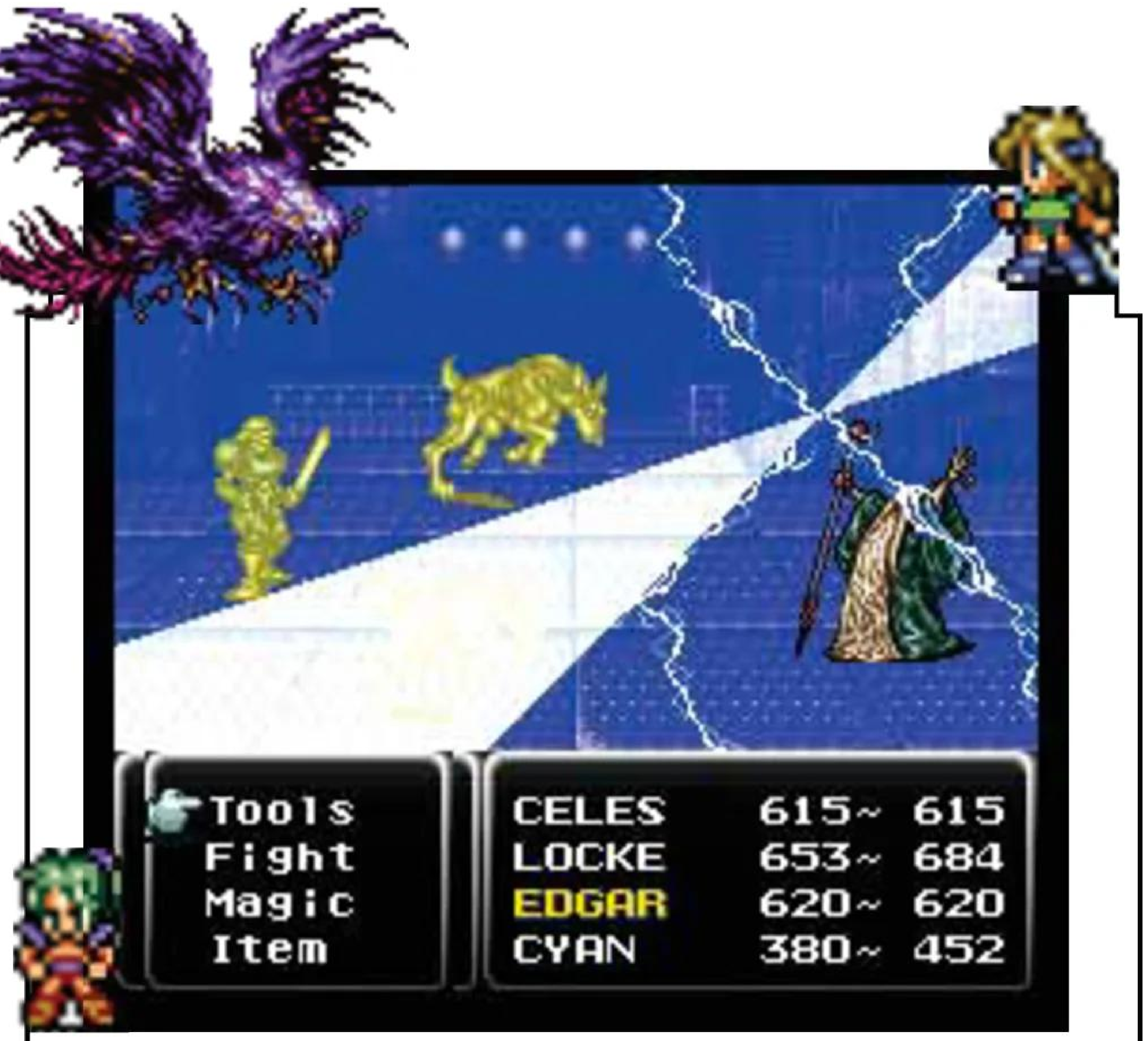
Donkey Kong

■ **Year:** 1981 ■ **Platform:** Arcade

100 **Nintendo's stint in the arcade business** was relatively brief, as its rapid rise to dominance in the console business during the Eighties made the coin-op business something of a secondary concern. But it's impossible to ignore this period of the developer's history, as it gave us *Donkey Kong* – the first appearance of the titular ape, as well as a moustachioed hero by the name of Mario, both designed by Shigeru Miyamoto.



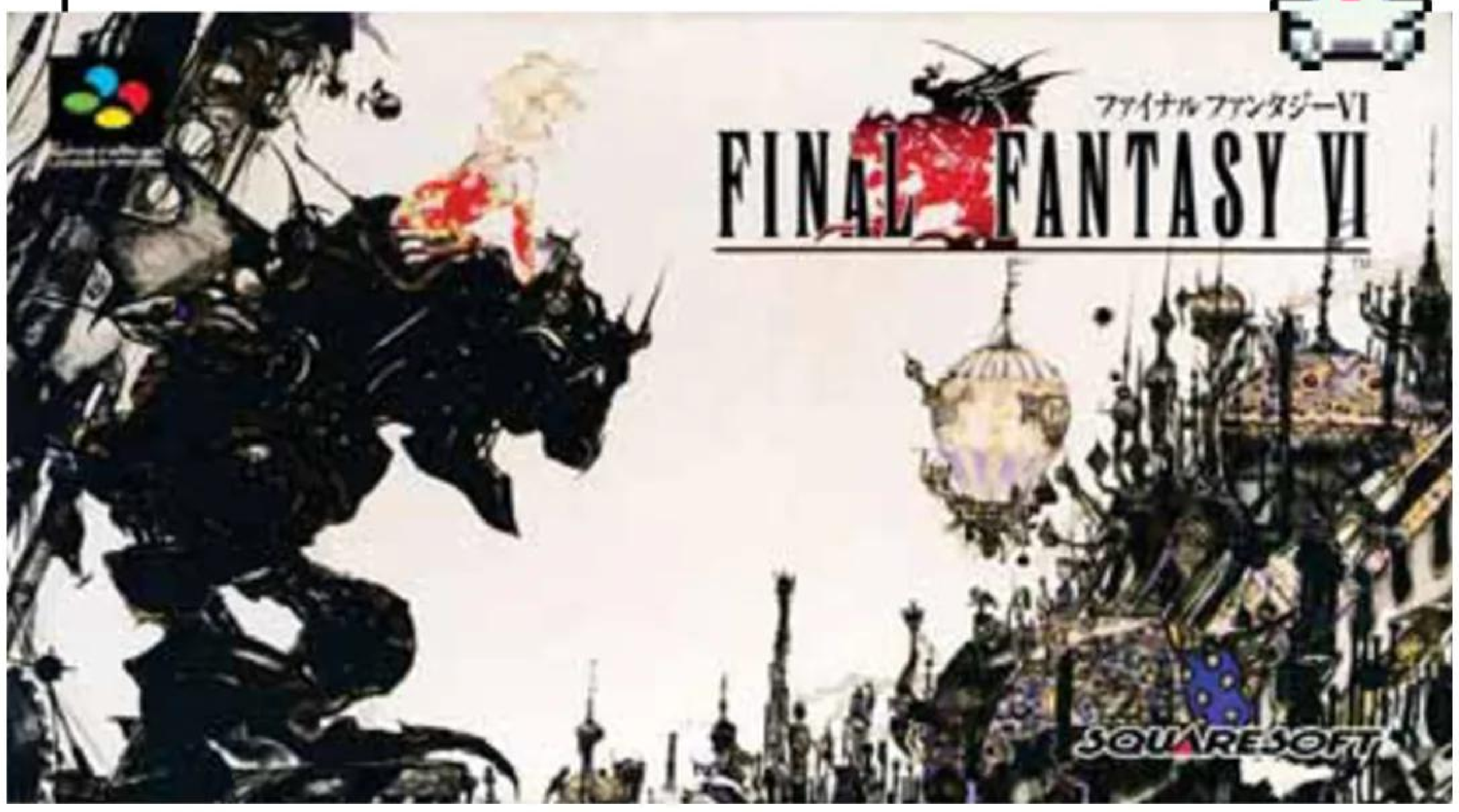
It's not just a museum piece, though – *Donkey Kong* is an early classic of the platform genre, and one that still draws fierce competition from high-score chasers around the world. While the game has a simple goal – either reach the top of the screen or pop the rivets from scaffolding, depending on the stage – it's incredibly tricky to play due to the unpredictable movement of the enemies. If you feel like challenging yourself, play it today.



Final Fantasy VI

■ **Year:** 1994 ■ **Platform:** SNES

99 **The SNES isn't exactly short of great RPGs,** and that's exactly why you should pay attention when people tell you that *Final Fantasy VI* is one of the console's best. The game shows just how far the developer had come graphically on the SNES – seriously, go back and compare it to Final Fantasy IV – and featured the best game design the series had seen. But it was the plot that really did the heavy lifting, as the game featured the best writing of the series' Nintendo years. The main antagonist, Kefka, proved to be an especially memorable villain thanks to his flamboyance, dark one-liners and truly terrifying nihilism.



98 Resident Evil

■ **Year:** 2002 ■ **Platform:** GameCube

When Capcom decided to remake its classic survival horror game for the GameCube, it set the gold standard for videogame remakes. The graphical leap was so great that it still looks fantastic today, and the game design was evolved considerably with the addition of extra scenes cut from the original design, new defensive weaponry and the terrifying Crimson Head zombies.

97 Wave Race 64

■ **Year:** 1996 ■ **Platform:** Nintendo 64

It seemed bizarre that *Wave Race*, an okay Game Boy racer, would get a sequel on Nintendo's shiny new 3D powerhouse – that is, until you saw it. It was a wonderfully colourful arcade racer, and one that demonstrated the N64's power with an amazing water simulation, complete with reflections and huge waves that allowed you to launch your jet ski into the air.

96 Gradius

■ **Year:** 1986 ■ **Platform:** NES

Konami's horizontally scrolling shoot-'em-up might have originated in the arcade, but a generation of players remember it better for its appearance on Nintendo's 8-bit console. Famously, it was a rock-hard game, which led to a developer adding a secret way to fully power up the Vic Viper spaceship. That little cheat is better known today as the Konami code!

95 Monster Max

Year: 1995 **Platform:** Game Boy

Following in the footsteps of games such as *Head Over Heels*, *Monster Max* is the final evolution of Jon Ritman and Bernie Drummond's isometric adventure formula. The game was fantastic and received great reviews in 1994, but it sold poorly due to a late release. Despite being a lost classic, it's still pretty easy to pick up, so do that.

94 Rhythm Tengoku

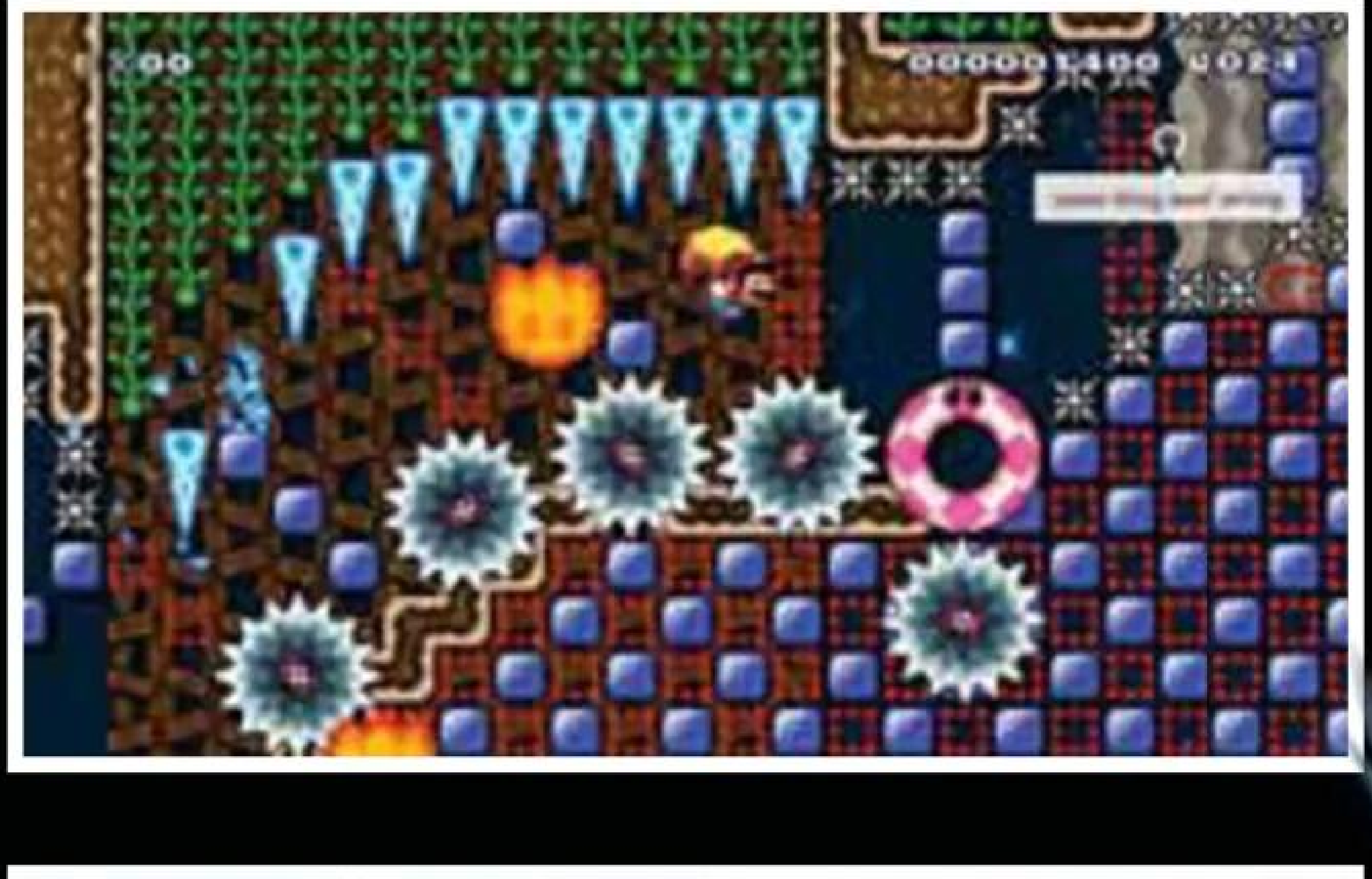
Year: 2006 **Platform:** Game Boy Advance

This rhythm action game tasks players with doing all manner of odd things in time with music, from plucking hairy onions to guiding a rabbit across the sea. Nintendo's final Game Boy Advance game was only released in Japan, but you should track it down anyway – it's not particularly complex, but its accessibility and sense of humour work wonders.

93 Super Mario Maker 2

Year: 2019 **Platform:** Switch

When Nintendo hands players the keys to the Mushroom Kingdom, things get a little bit weird. Creating your own levels is enjoyable and Nintendo includes 100 stages, but go online and you'll find bizarre storytelling stages, spectacular automatic runs and some truly evil challenge courses designed by sadists. These break all of Nintendo's rules, and that's the fun of it.



Sonic Rush

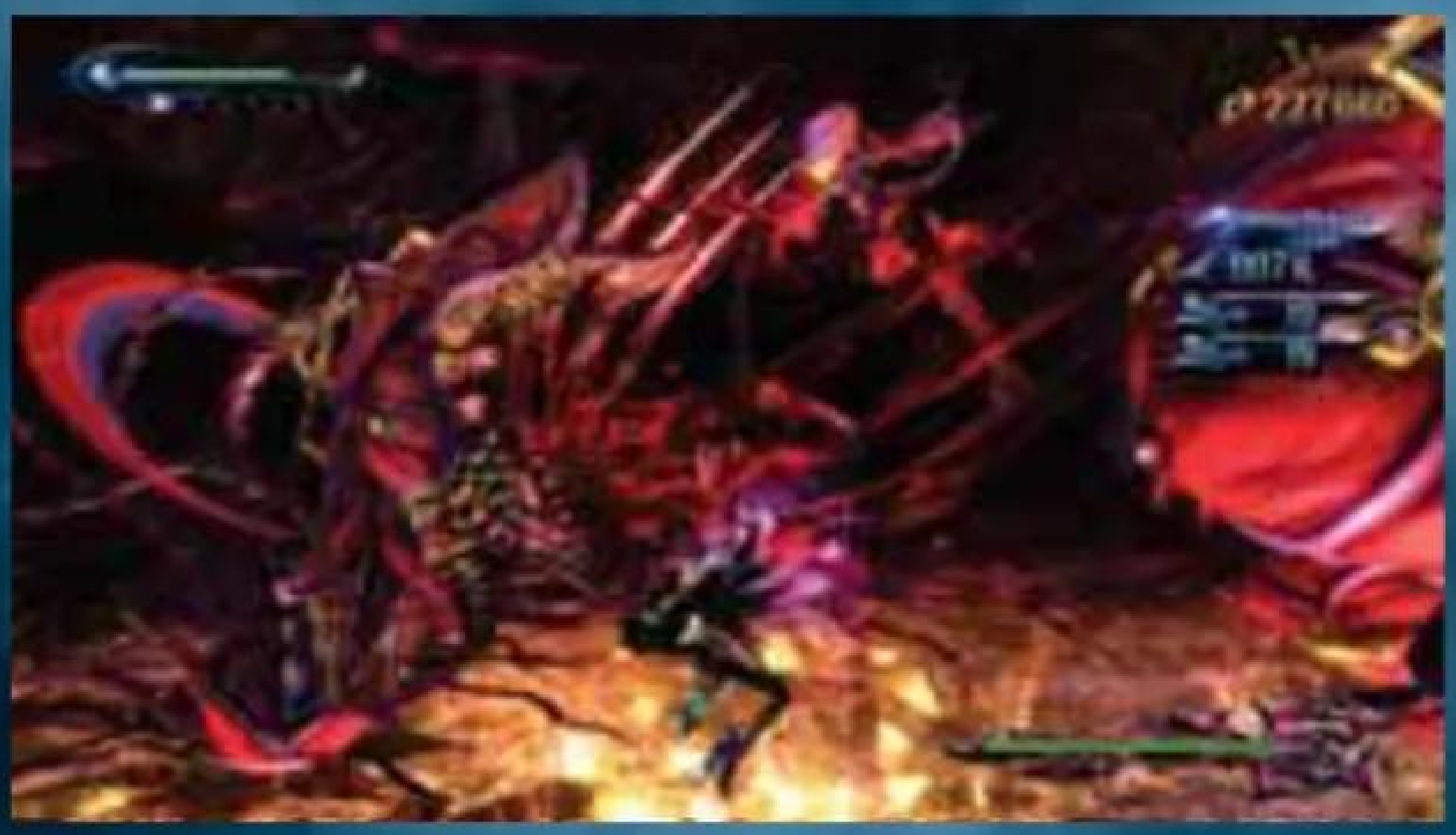
Year: 2005 **Platform:** DS

92 **Given Sonic's origins** as a character designed to compete with Nintendo, it's ironic that he's flourished on Nintendo hardware – and *Sonic Rush* is a great example of that. The idea of a 2D Sonic platform game was nothing new, but the series' first DS game revitalised the formula by employing 3D sparingly for mid-stage interludes and boss battles, as well as introducing a boost mechanic that allowed Sonic or newcomer Blaze to charge straight through enemies at top speed. The icing on the cake was an awesome soundtrack by Hideki Naganuma, who successfully merged Sonic's signature upbeat audio with the sample-heavy style he had perfected in the *Jet Set Radio* series.

Bayonetta 2

Year: 2014 **Platform:** Wii U

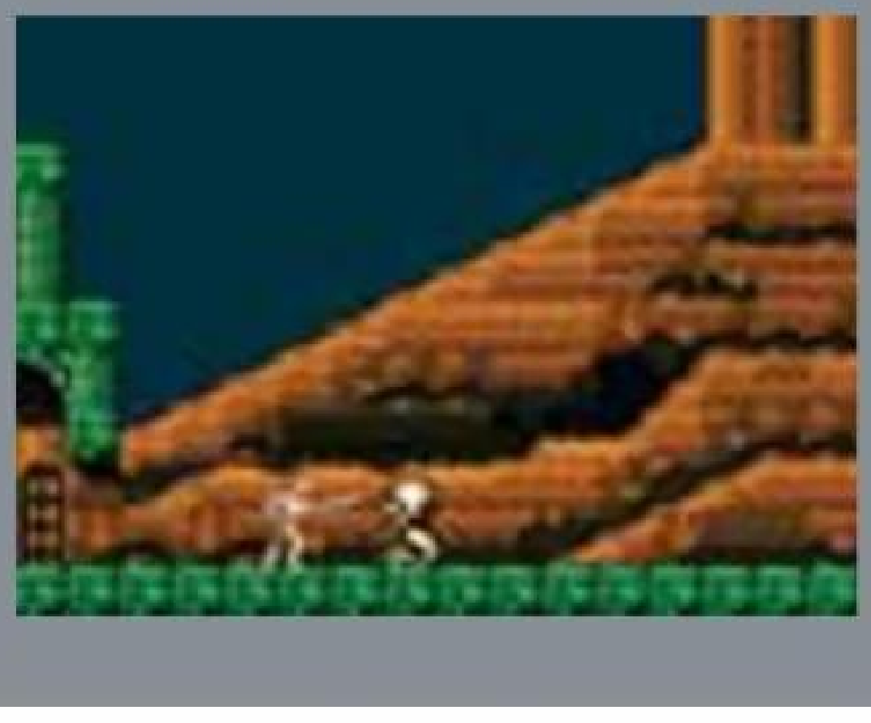
91 **When it was looking** for a way to bring hardcore action gamers to the Wii U, Nintendo decided to rescue Platinum Games' bewitching heroine – *Bayonetta 2* had already been started, but shelved at publisher Sega's behest. It didn't save the troubled console, but players got a tremendous game out of the deal. The original game had inherited a fine hack-and-slash template from the *Devil May Cry* series, which many of its developers had worked on, and the sequel further refines it with improved pacing and an even more beautiful art direction. The game throws overwhelming numbers of enemies at you, but its genius is that you always feel able to conquer them.



90 Faxanadu

■ **Year:** 1987 ■ **Platform:** NES

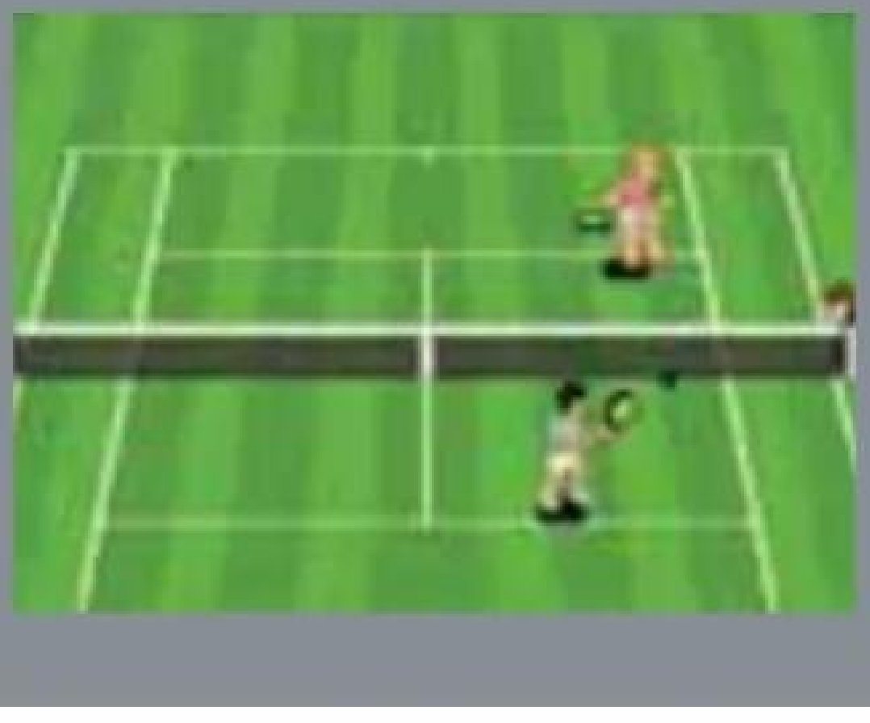
Though kids were the primary console audience back in the Eighties, Hudson Soft's adventure avoids the cartoonish look favoured by many NES games, and presents a sophisticated platform-RPG hybrid. Your character's skills and abilities grow as you play, and there are plenty of non-player characters to speak to, but exploration and combat are handled in typical platform game fashion.



89 Super Tennis

■ **Year:** 1991 ■ **Platform:** SNES

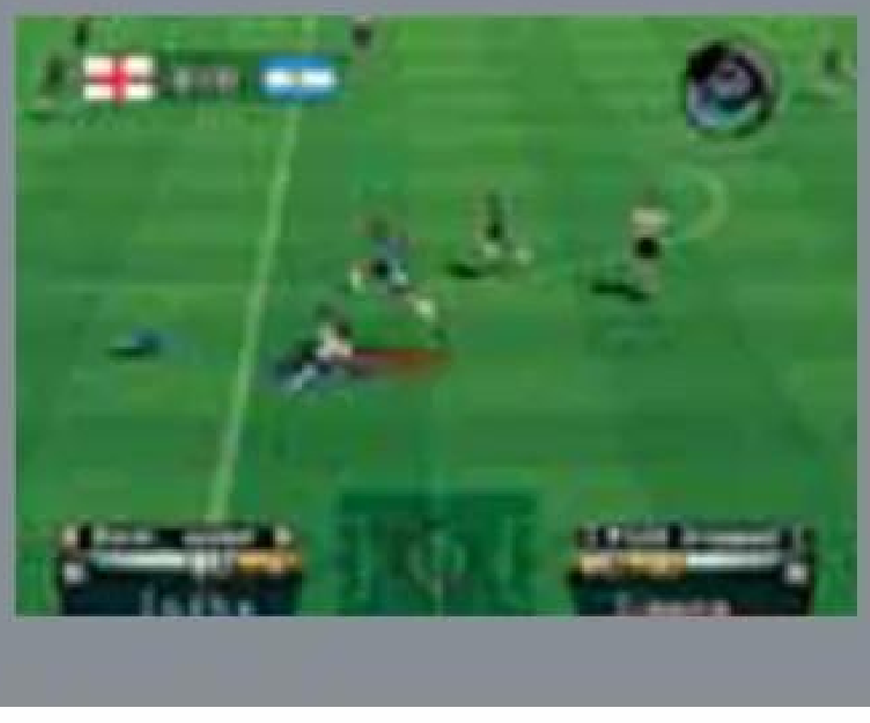
Once a generation, a great tennis game comes along, and before the likes of *Virtua Tennis* and *Smash Court Tennis*, this 16-bit effort had players screaming "You cannot be serious!" during heated multiplayer sessions. The game's cute players, Mode 7-enhanced presentation and amazing sound effects all deserved praise, but it was the subtlety of play that made it so enthralling.

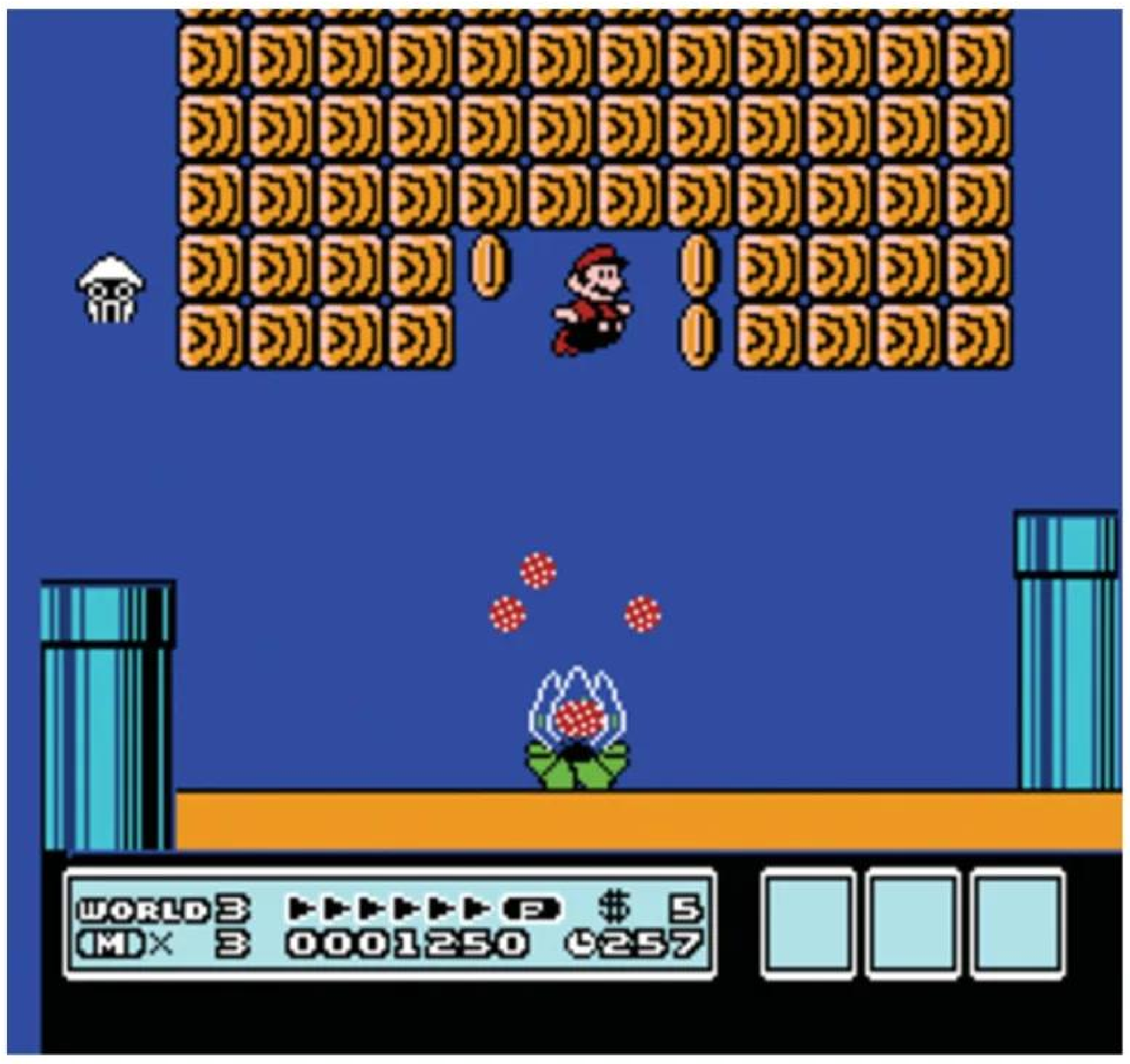


88 International Superstar Soccer 98

■ **Year:** 1998 ■ **Platform:** Nintendo 64

During the late Nineties, football aficionados would only seriously consider one 3D series. *FIFA* had real player names and TV-style presentation, but Konami's *ISS* games offered a better on-pitch experience, with more fluid play and additional techniques. Released in a World Cup year, this outing built on the strengths of its predecessor.

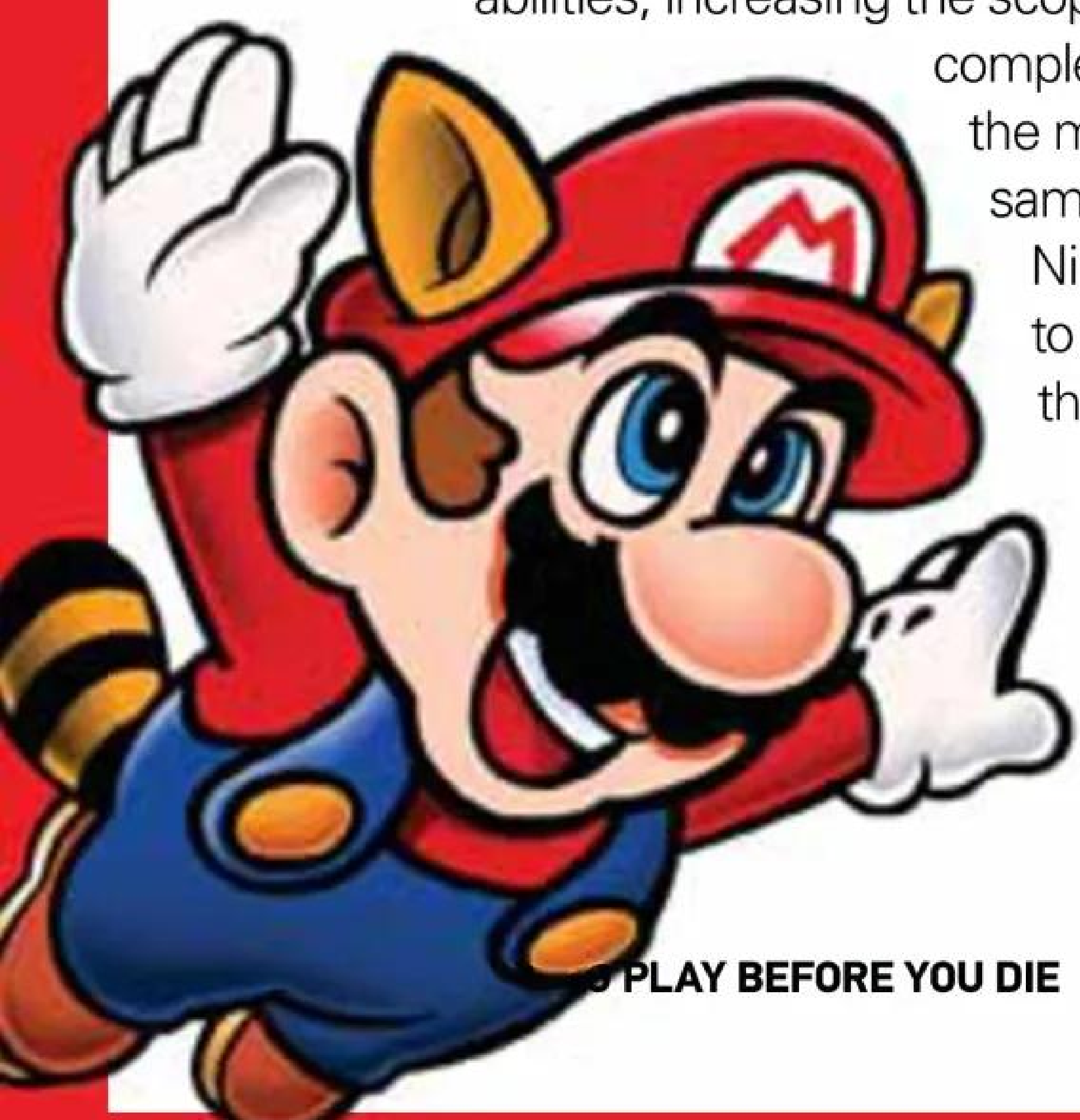




Super Mario Bros 3

■ **Year:** 1988 ■ **Platform:** NES

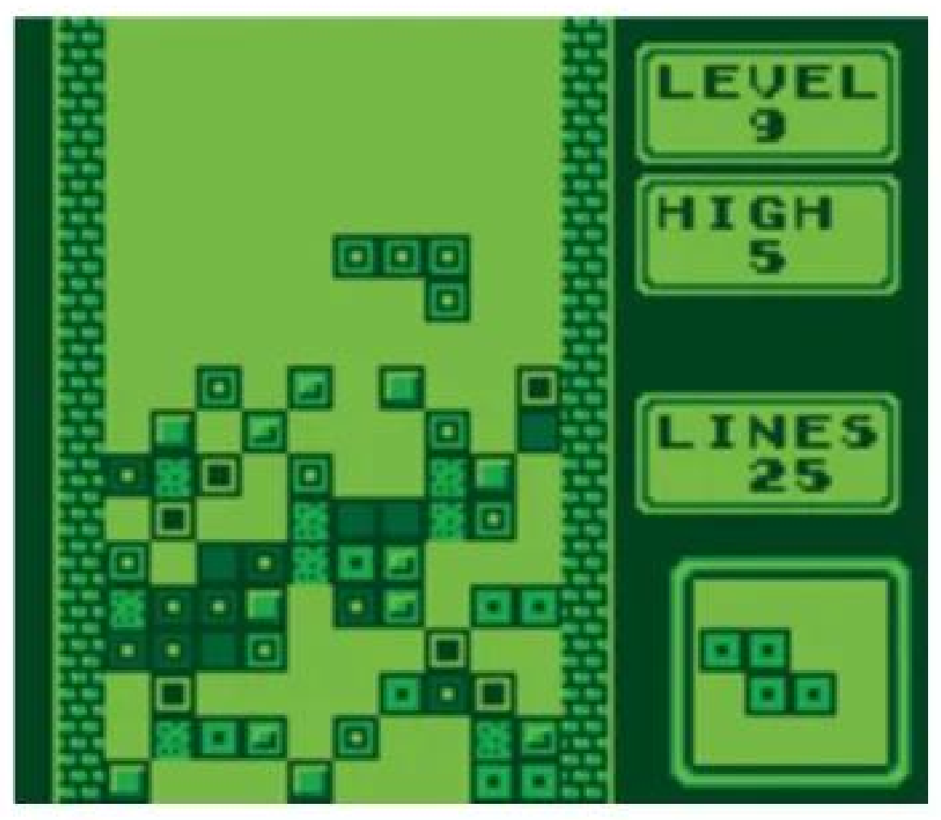
87 ***Super Mario Bros* was an astounding platform game,** and it's fair to say that *Super Mario Bros 2* wasn't quite what players had in mind for a follow-up – whether that was the sadistic pseudo-expansion Japanese players got, or the reskinned *Doki Doki Panic* released internationally. *Super Mario Bros 3* was the true successor, and it didn't disappoint – it was bigger and better in every way. The world map allowed players to chart their own course through the game. New power-ups like the raccoon suit gave Mario new abilities, increasing the scope of level design. Graphics were completely overhauled and refined, and the music was greatly enhanced with sampled drum beats. Additionally, Nintendo's design team really began to hit its stride, coming up with the tricky and imaginative assault courses that have defined Mario to this day, with the excellent airship stages as highlights. Nothing else on the NES comes close.

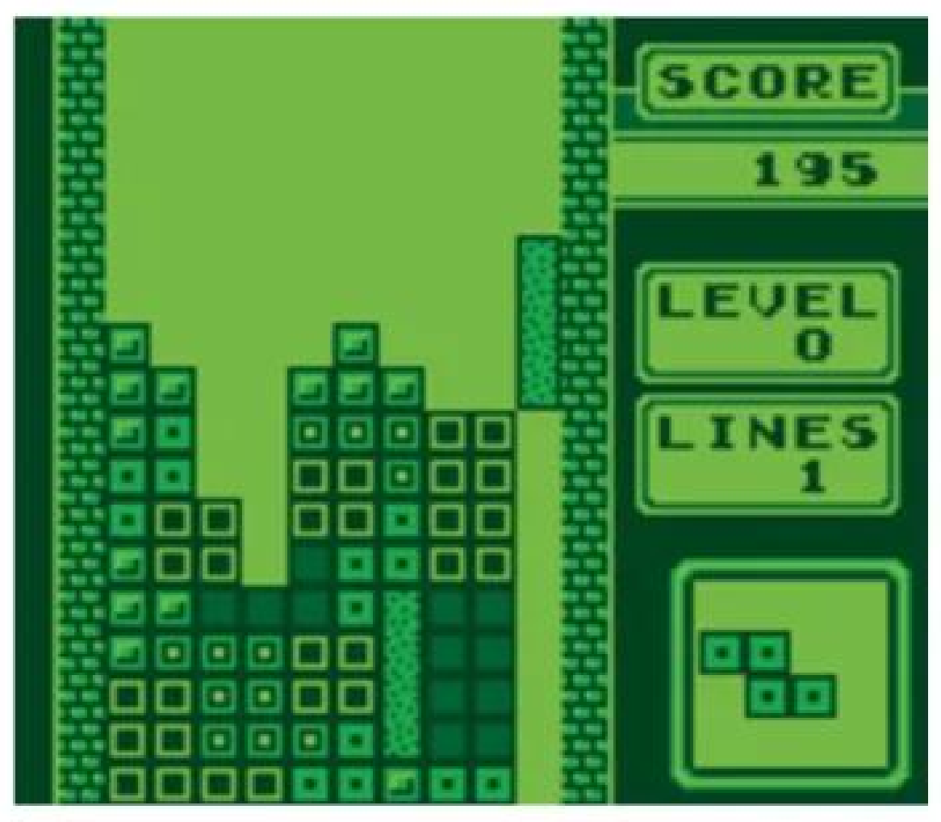


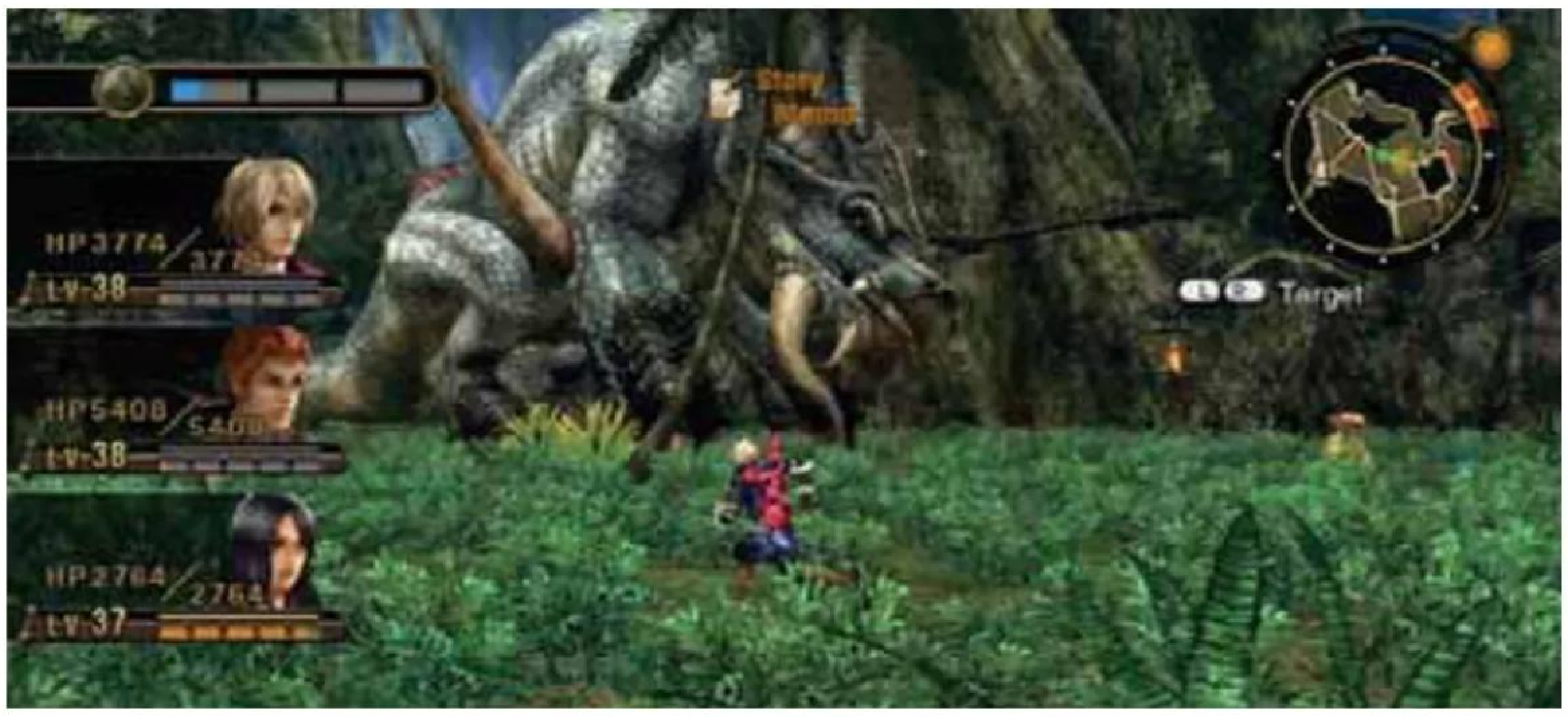
Tetris

■ **Year:** 1989 ■ **Platform:** Game Boy

86 **Alexey Pajitnov's classic puzzle game** is so simple that it seems like it should be dull. After all, your sole aim is to manipulate blocks to create unbroken rows until you've failed enough times that there's no room left on the screen. But we love turning order into chaos, and the tension of seeing how long you can last against the ever-increasing speed of the blocks turns a simple game into a deliciously addictive one. If that wasn't enough, the game's music was just as catchy – just look at those screenshots and tell us you can't hear Korobeiniki. Everyone from world leaders to your grandmother loves *Tetris*. Join them, now.





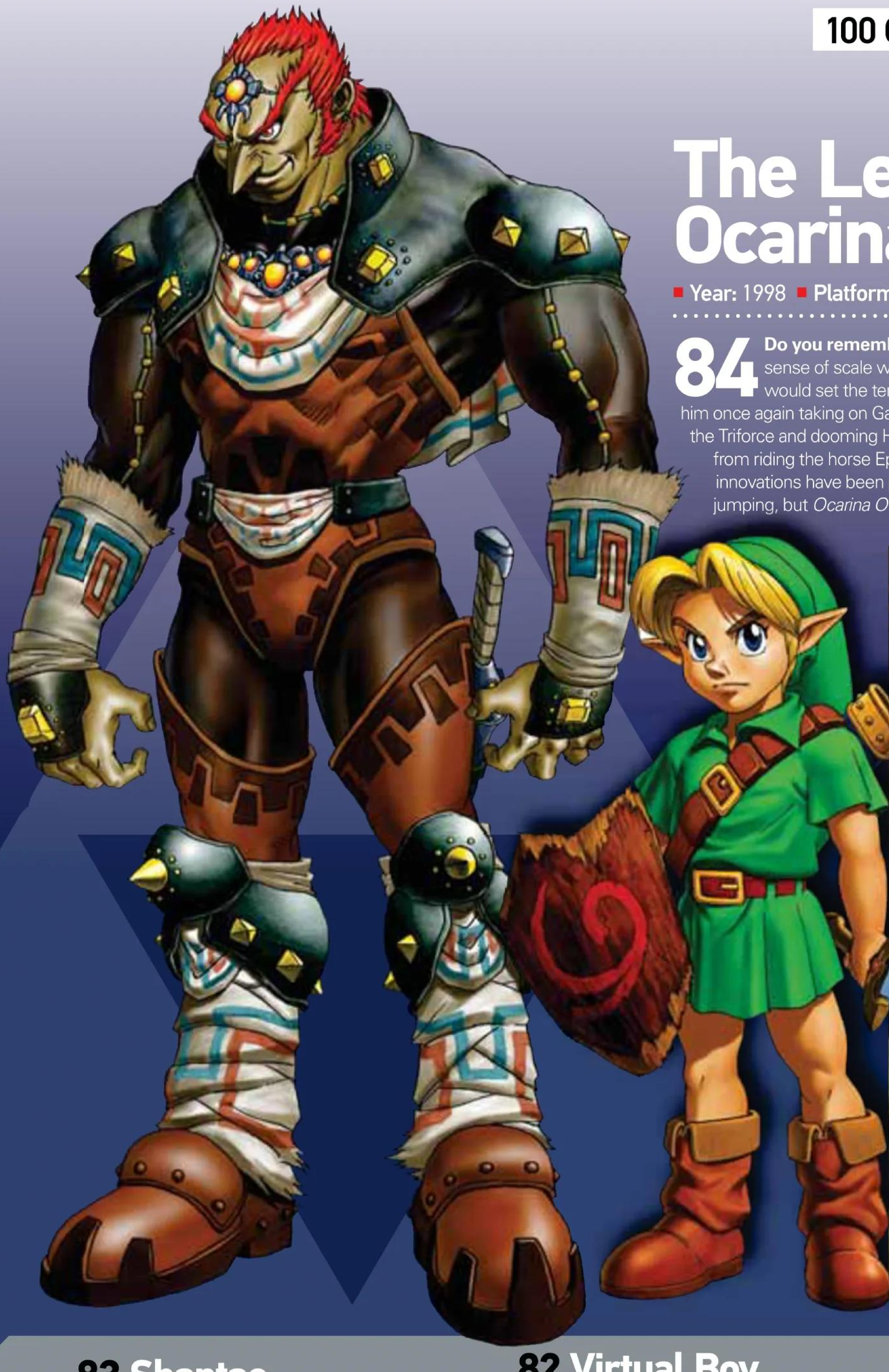


Xenoblade Chronicles

■ **Year:** 2010 ■ **Platform:** Wii

Wii
Xenoblade Chronicles
12

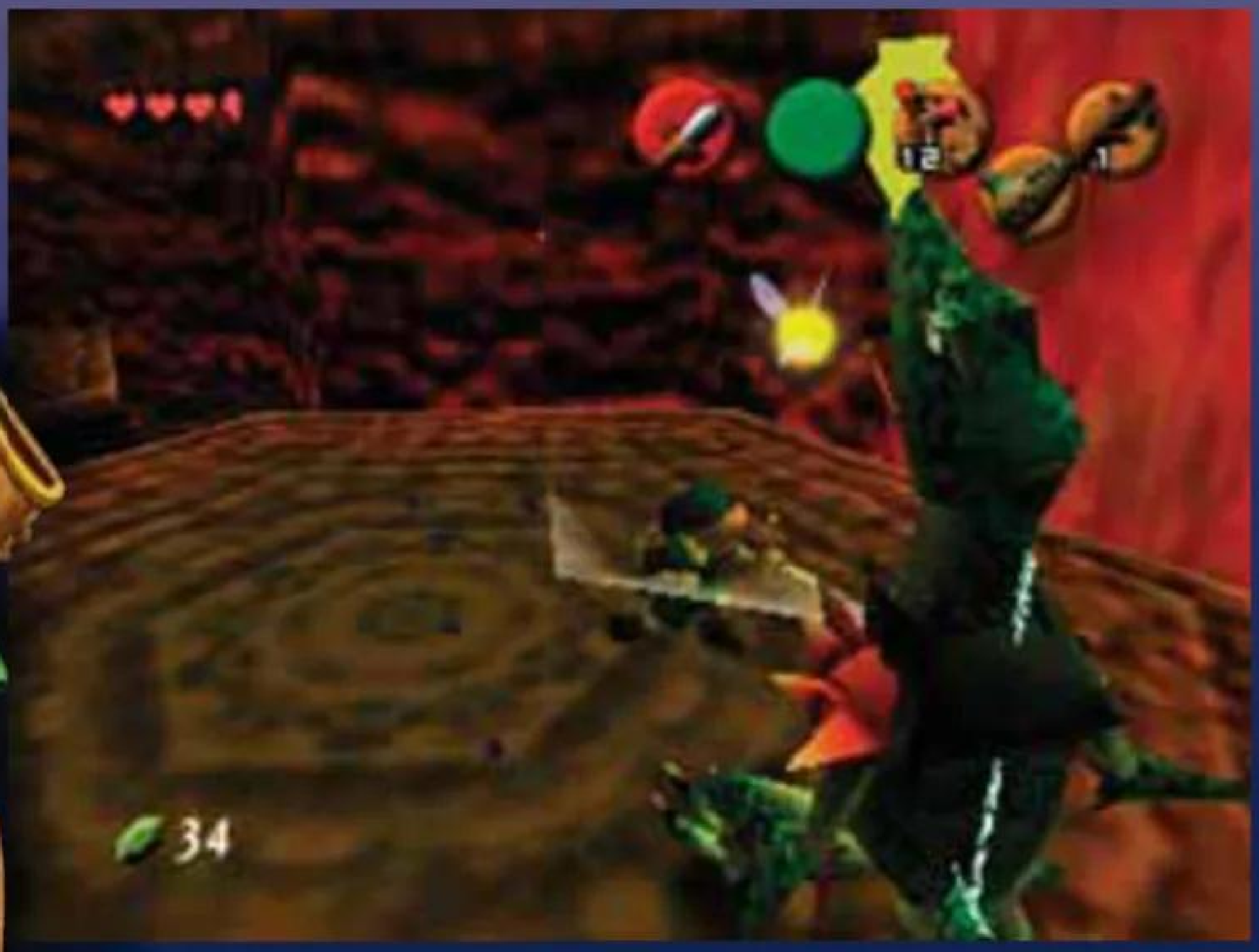
85 **Though it's best known** for its ability to woo casual players, the Wii underwent a JRPG-driven renaissance late in its life, thanks to games like *Pandora's Tower* and *The Last Story*, but *Xenoblade Chronicles* led the charge. While the plot was pretty standard fare for the genre, the game's design was forward-thinking, with a real-time battle system that blended automatic attacks with manually activated Arts, and systems that allow you to intercept and deliberately lure enemy attacks. The open environments and streamlined quest system also helped to drive the genre forward. If you're without a Wii, there's a very good new Nintendo 3DS port available too, or you could wait for the incoming Switch remaster.

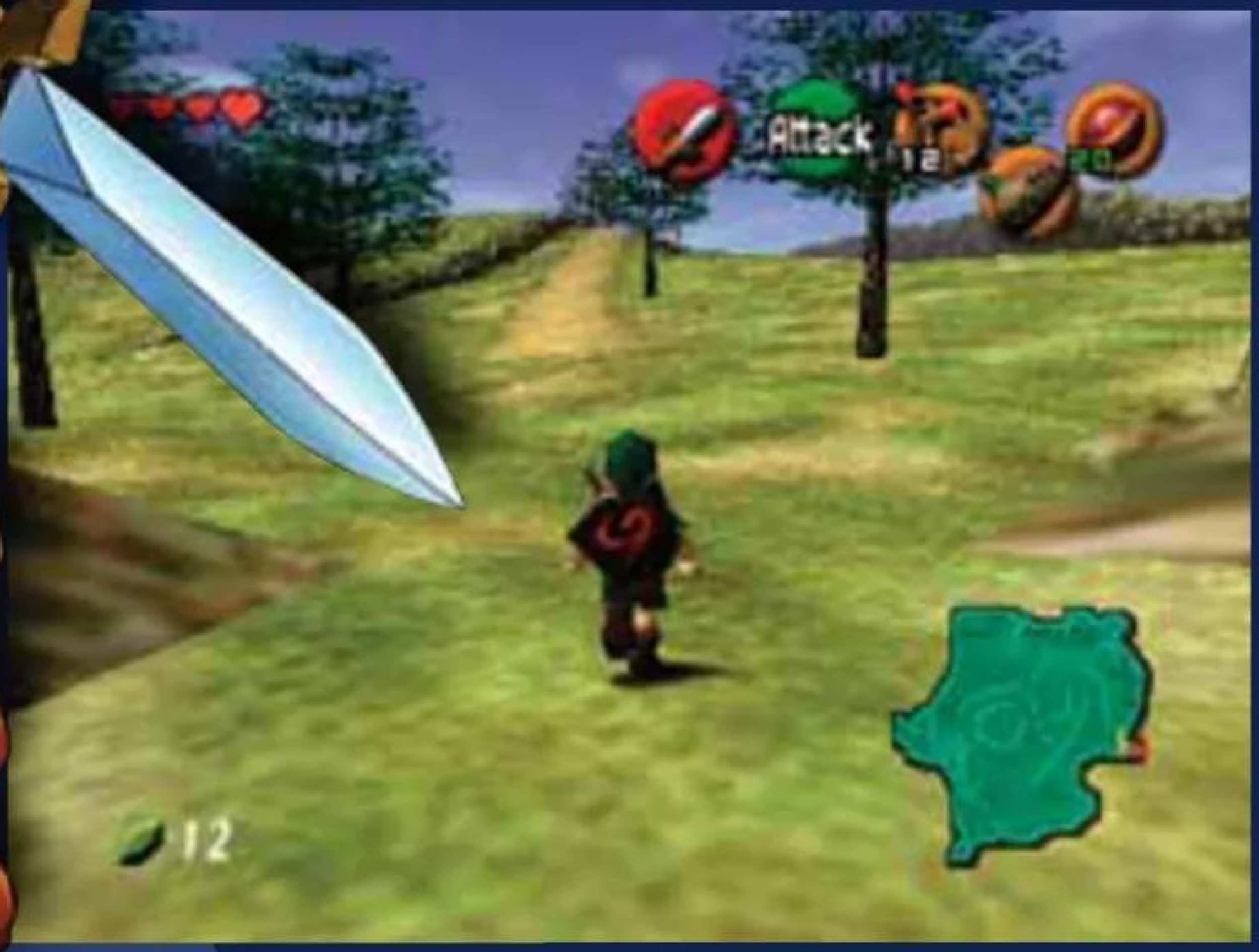


The Legend Of Zelda: Ocarina Of Time

■ **Year:** 1998 ■ **Platform:** Nintendo 64

84 **Do you remember the first time you ventured out into Hyrule Field?** That sense of scale was the triumph of the *Zelda* series' move to 3D in a game that would set the template for all the games that followed. Link's fifth quest sees him once again taking on Ganondorf, travelling through time to prevent him from obtaining the Triforce and dooming Hyrule. The game offers a huge world with lots to experience, from riding the horse Epona to entering the pit of Jabu-Jabu's belly. Many of its innovations have been pinched by other games, from the Z-targeting system to auto-jumping, but *Ocarina Of Time* remains in a class of its own. A 3DS update also exists.





83 Shantae

■ **Year:** 2002 ■ **Platform:** Game Boy Color

Most players had moved on to the Game Boy Advance by the time *WayForward*'s brilliant platform adventure was released, and they missed out – the half-genie hero's first game featured some awesome colourful stages and excellent animation. It's not easy to find now, especially as it was exclusive to North America, but you should try it if you get a chance.

82 Virtual Boy Wario Land

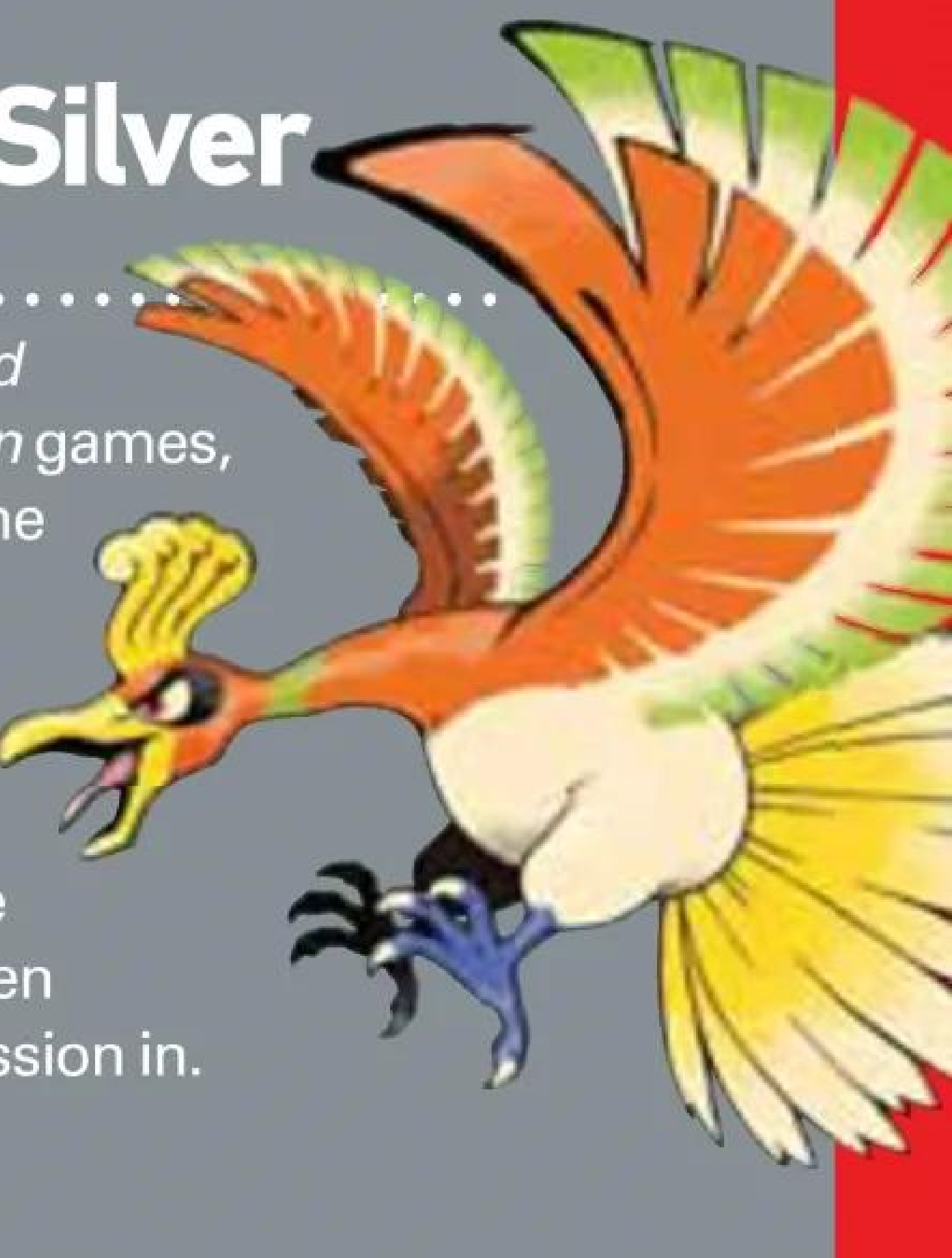
■ **Year:** 1995 ■ **Platform:** Virtual Boy

WARIO LAND
VIRTUAL BOY

Wario's second starring role in a platform game is the best reason to hunt down Nintendo's forgotten system – it'll take you a good while to find all of the hidden treasures, and even more time to figure out how to do it quickly enough to get the best ending. It features beautiful detailed sprites and great scaling bosses.

81 Pokémon HeartGold/SoulSilver

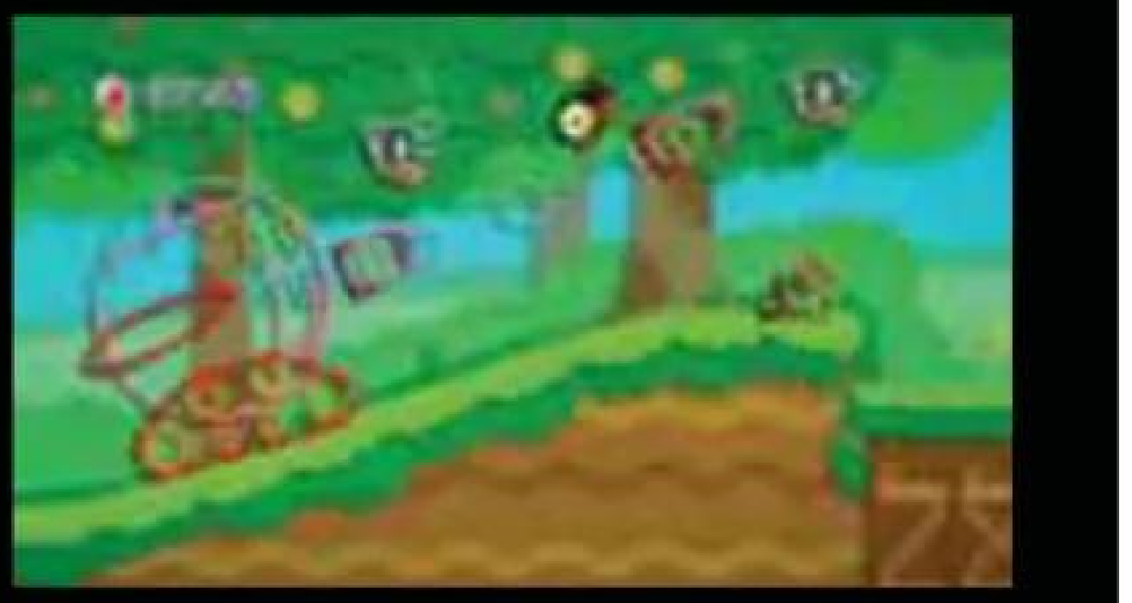
■ **Year:** 2009 ■ **Platform:** DS



Players had long argued that *Gold* and *Silver* were the best *Pokémon* games, until these excellent remakes came along. Not only did they bring a classic adventure up to modern standards, they came with the Pokéwalker – a brilliant little accessory device that let you take your Pokémon out for training even when you couldn't fit a full DS session in.

80 Kirby's Epic Yarn

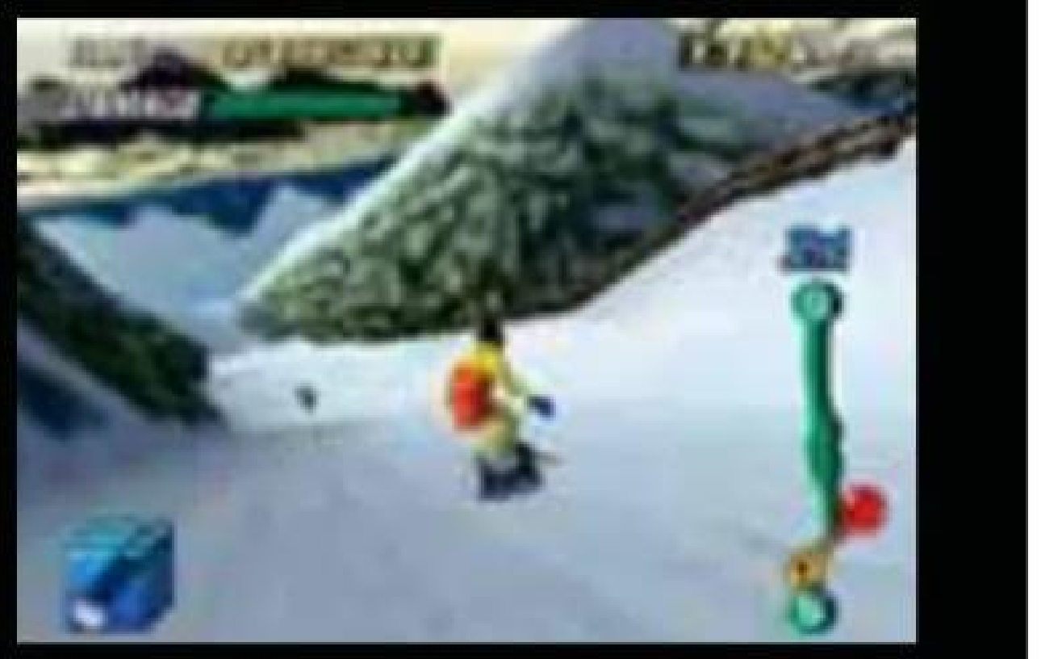
■ **Year:** 2010 ■ **Platform:** Wii



What happens when you remove Kirby's ability to hoover up enemies with his almighty gob? According to this game, he just finds another way to take on all manner of abilities – in this case, reconstituting his yarn body into new forms, including cars and parachutes, so what could have been a simple graphical gimmick is elevated by Good-Feel's design ingenuity.

79 1080° Snowboarding

■ **Year:** 1998 ■ **Platform:** Nintendo 64

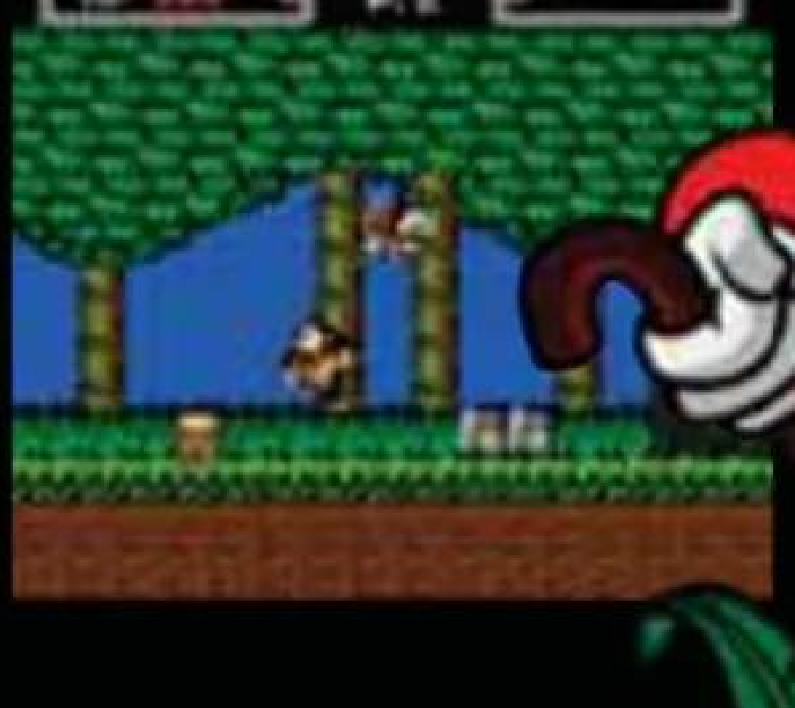


Nintendo's winter sports hit blew away the competition at the time, thanks to its grounded and realistic approach to the sport of snowboarding, emphasising technical fundamentals over insane grabs and getting unrealistic air. The game was also beautiful, with solid, detailed character models and neat graphical effects that hadn't previously been seen elsewhere, like lens flare and sunlight glinting off the snow.

78 DuckTales

■ **Year:** 1989 ■ **Platform:** NES

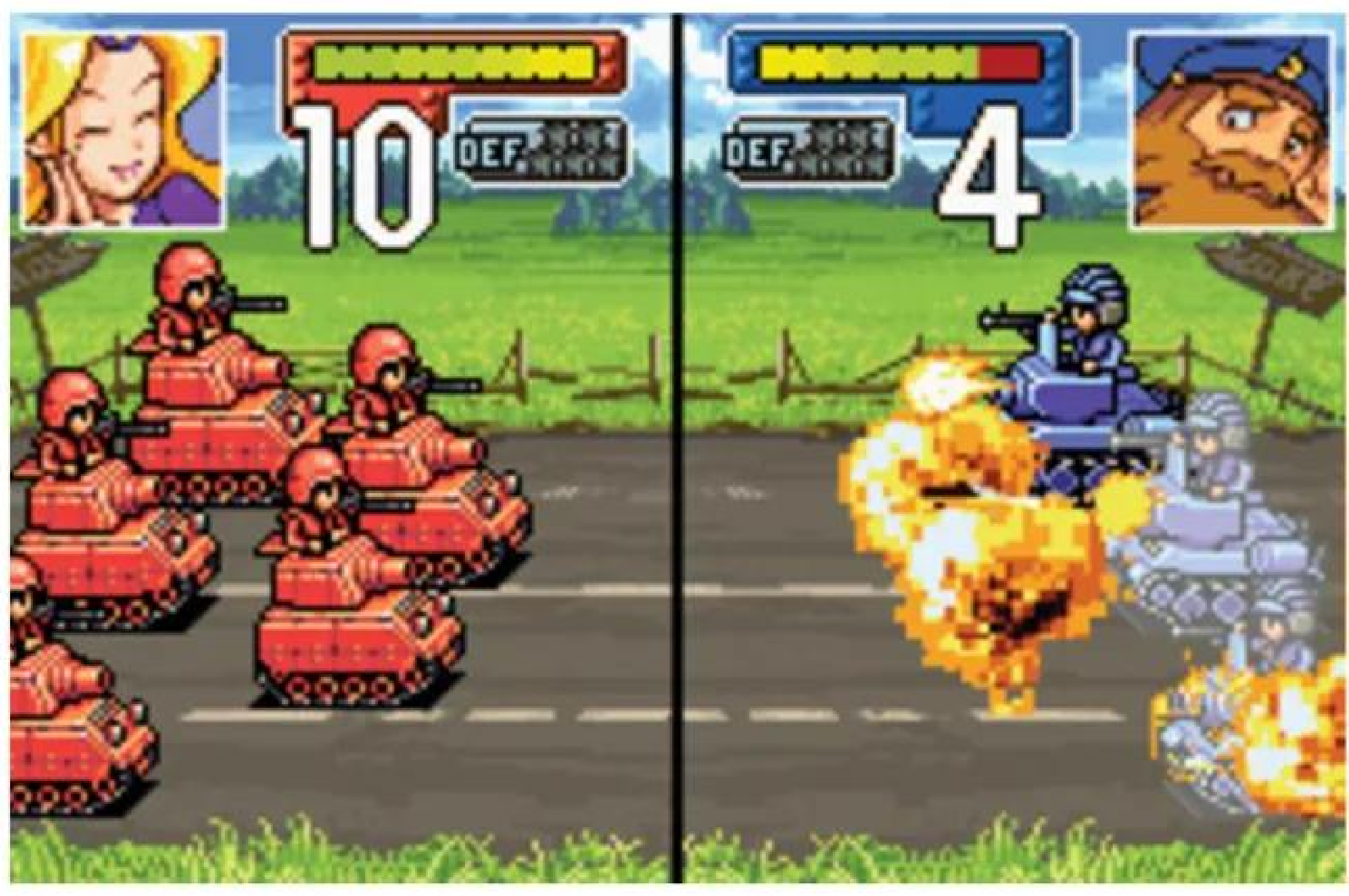
Capcom was well known for turning out great Disney licensed platformers during the NES era, and *DuckTales* is the most fondly remembered of the lot. Part of that will be because of the game's non-linear structure, which required you to collect items in various stages to progress, but largely it's because hopping around on Scrooge McDuck's cane is just great fun.

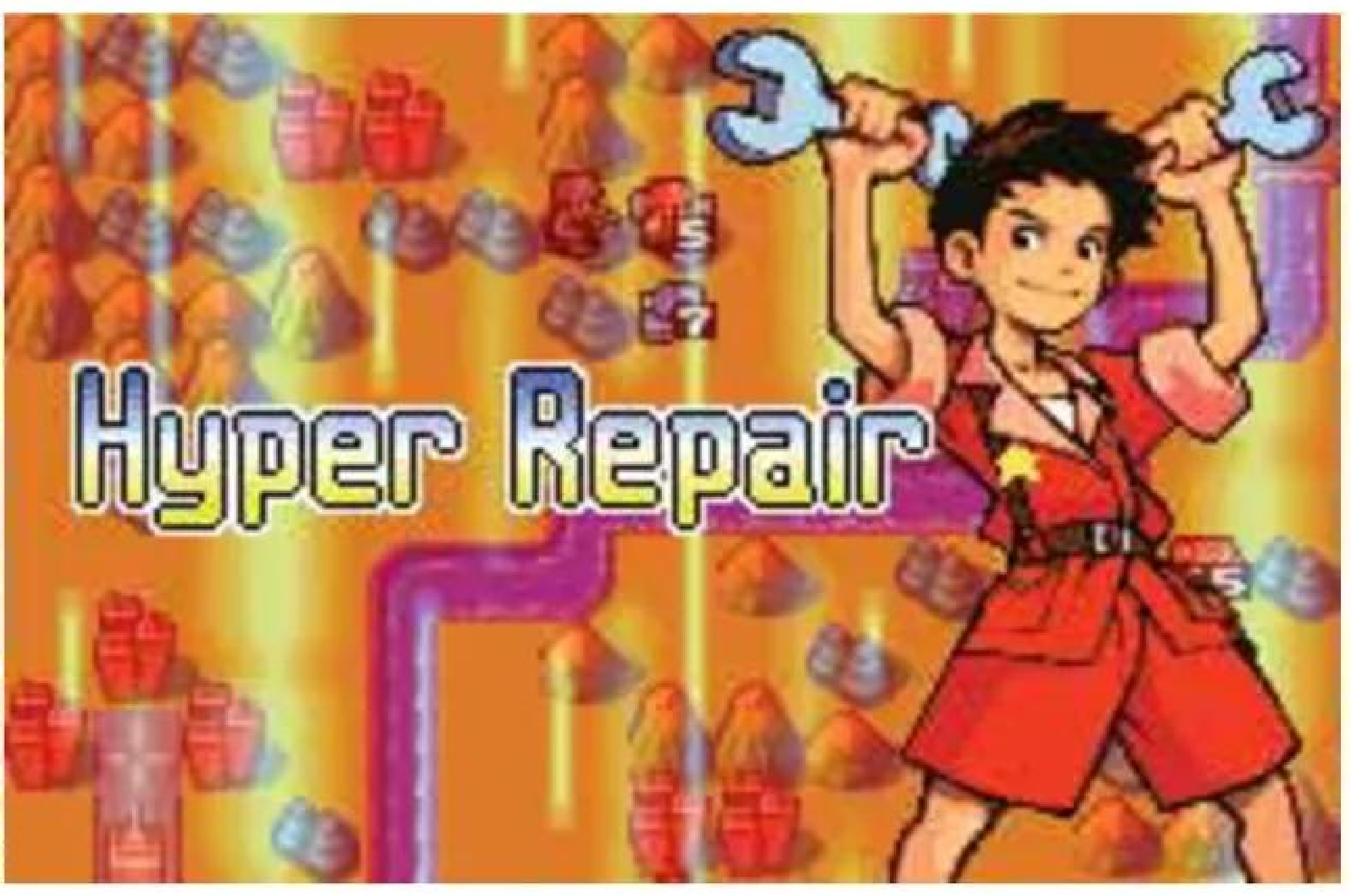


Advance Wars

■ **Year:** 2001 ■ **Platform:** Game Boy Advance

77 **Prior to the launch** of the Game Boy Advance, only Japanese audiences had been able to sample the delights of Intelligent Systems' turn-based strategy games – there were six *Wars* games prior to *Advance Wars*. When we finally got the chance to experience them, we wondered where they had been all our lives. *Advance Wars*' dinky tanks and cutesy soldiers provided a universal appeal, with accessible yet deep strategic gameplay to back it up, and a structure that suits portable play. With a lengthy single-player campaign, excellent multiplayer and a range of commanding officers with their own unique powers to master, *Advance Wars* will keep your inner general satisfied for ages.

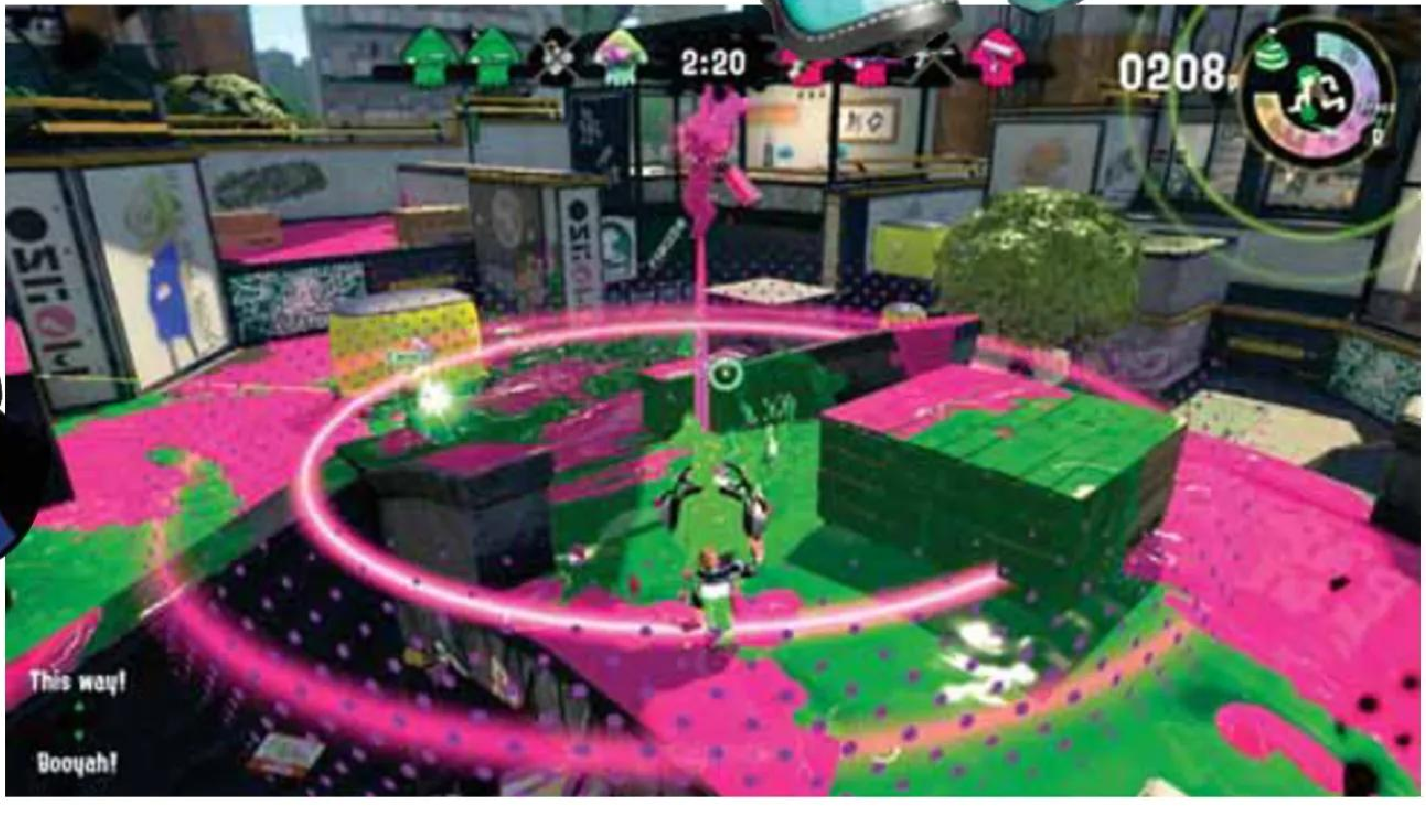




Splatoon 2

■ **Year:** 2017 ■ **Platform:** Switch

76 ***Splatoon* was the surprise hit** of the Wii U's troubled life, but the sequel took the formula to the next level. The family friendly shooter delivered similar thrills to its predecessor, with territorial coverage and objective control emphasised over splatting opponents in modes such as Turf War and Tower Control, and it allowed players to defend the honour of ketchup and mayonnaise in Splatfests. But as well as new weapons and clothing, the game adds more substantial single-player content (particularly in *Octo Expansion*) and the ability to splat your friends in local networked games. Plus, new Inkopolis News hosts Pearl and Marina proved to be worthy successors to Callie and Marie!



75 RC Pro-Am

■ **Year:** 1987 ■ **Platform:** NES

This captivating little isometric racer was one of Rare's first NES projects after abandoning the world of home computer games it had conquered as Ultimate, and console owners benefitted from the move. Players could take out their opponents' radio-controlled cars with bombs and missiles, and with 24 tracks to race on, it wasn't a game that was quickly mastered.

74 Animal Crossing: New Leaf

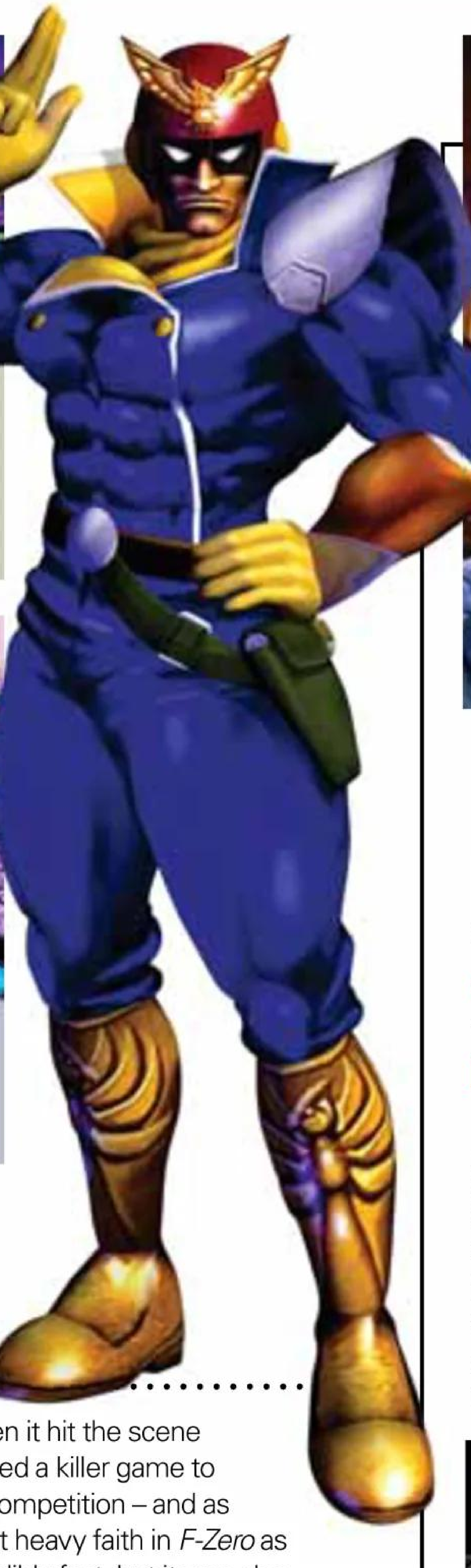
■ **Year:** 2013 ■ **Platform:** 3DS

The best version of Nintendo's social simulation so far allows you to do all of your favourite things – as always, you can upgrade and customise your house, chat to the townsfolk and visit your friends' towns. However, because you now play the mayor instead of a random villager, you get a lot more control over the way your town develops.

73 Mario Golf

■ **Year:** 1999 ■ **Platform:** Game Boy Color

The *Mario* sports games usually offer accessible, simplified takes on the sports they adapt, and *Mario Golf* is no different. However, what makes this particular game stand out is its single-player mode – a fantastic RPG jaunt in which you develop your character's golfing skills as you progress in the hope of working your way up to play with Mario himself.



F-Zero

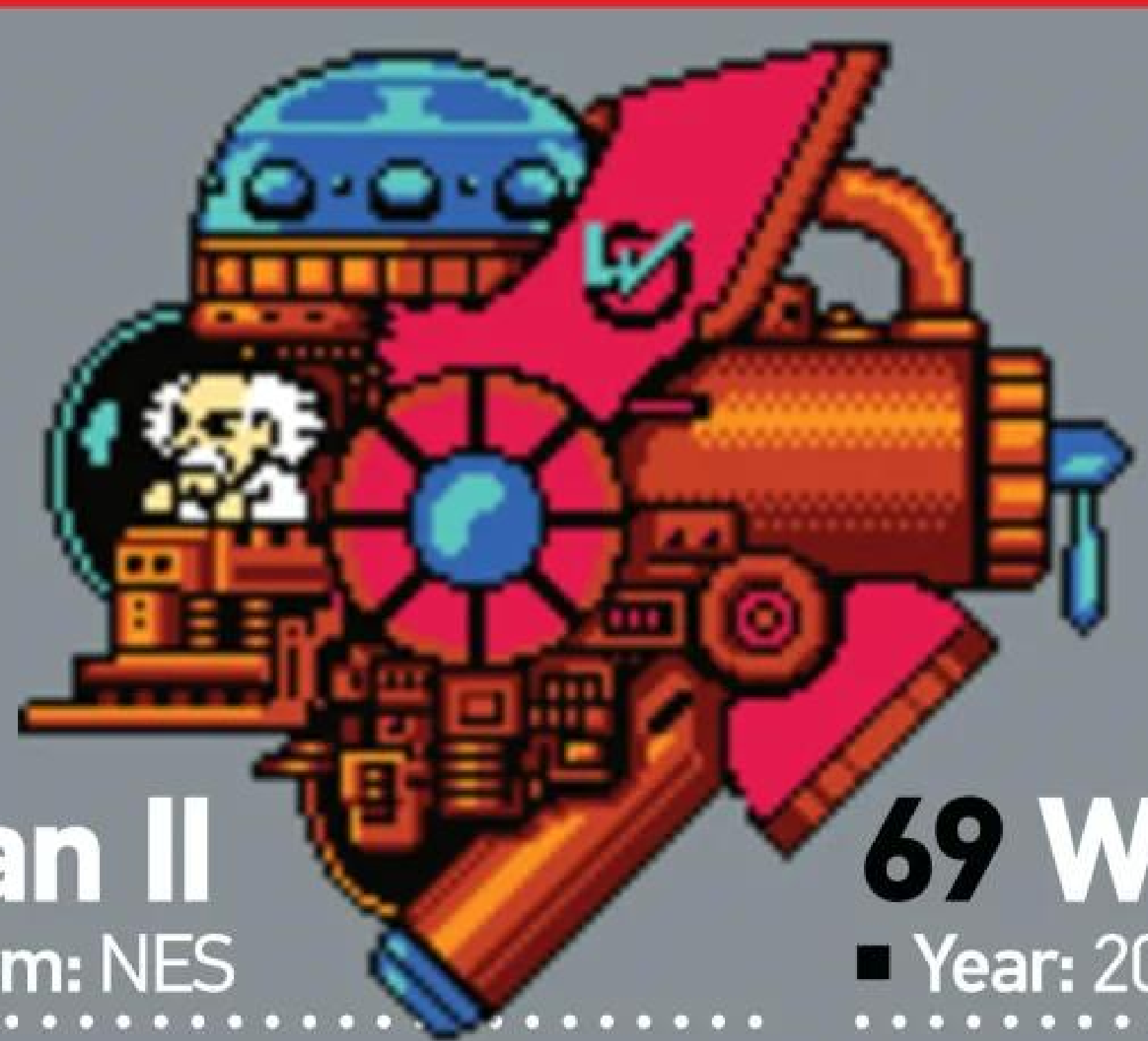
■ **Year:** 1990 ■ **Platform:** SNES

72 **The SNES was a powerful machine** when it hit the scene at the beginning of the Nineties, but it needed a killer game to demonstrate just how it differed from the competition – and as one of just two games available at launch, Nintendo put heavy faith in *F-Zero* as the game to do it. The futuristic racing game was incredibly fast, but it was also amazingly smooth thanks to the console's signature Mode 7 feature, which allowed smooth 3D transformations of a background plane. The soundtrack, created from sampled sounds, featured highly memorable compositions right from the first Mute City track. Of course, proving the machine's power was one thing, but *F-Zero* was more than just a technical showcase. The game featured an exquisite handling model and tricky track design that pushed players to their limits, as well as a devilish elimination race format that turned an impressive game into an instant classic.

Contra III: The Alien Wars

■ **Year:** 1992 ■ **Platform:** SNES

71 **Konami's classic run-and-gun** channels the spirit of every classic action movie into a game that is packed with crazy weapons, crazier enemies and countless explosions. As the player battles the invading alien menace through futuristic war zones, the SNES is pushed to its limits – the game features enormous bosses, high-speed highway chases and even two top-down stages that use Mode 7 for rotation. The developer's even achieves the seemingly impossible, with a rotating boss and a rotating floor at the end of stage two! It's not an easy game, but you can drag a friend along for the ride for support – and trust us, they'll thank you when you do.



70 Mega Man II

■ **Year:** 1987 ■ **Platform:** NES

After the original *Mega Man* failed to meet Capcom's sales expectations, the team worked on a sequel as a labour of love. That love comes through when you play the game – it has the most memorable Robot Masters, music that drills its way into your mind, and game design that subtly improves on the original in just about every way.

69 WWF No Mercy

■ **Year:** 2000 ■ **Platform:** Nintendo 64

Many people still consider this the greatest wrestling game for any system, and with good reason. As well as featuring a whole host of popular stars including Stone Cold Steve Austin, The Rock, Triple H and Kurt Angle, *WWF No Mercy* has a nuanced grappling system that accounts for weight and fatigue, and offers great create-a-wrestler options.

68 Metal Gear Solid

■ **Year:** 2000 ■ **Platform:** Game Boy Color

Despite bearing the same name as the famous PlayStation game, Solid Snake's first portable outing was a completely original adventure that harked back to his earlier missions on the MSX and NES. The game served as a timely reminder that *Metal Gear Solid*'s appeal was more about finely tuned stealth action than cutting-edge graphics and expertly directed cinematic scenes.

NO ITEM
NO ITEM
LIFE

LIFE
222 09 30 0

LIFE
332 09 30

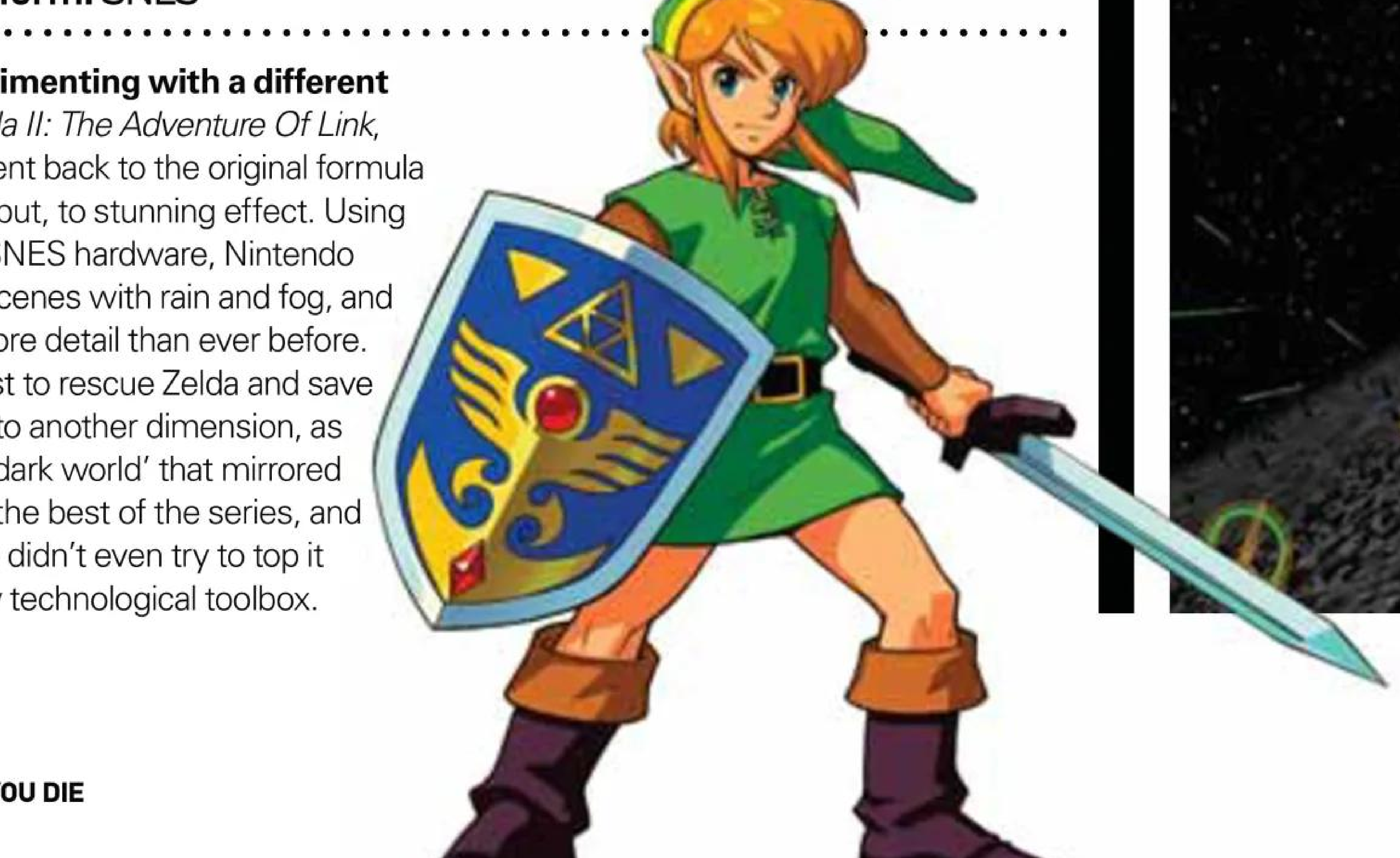
LIFE
407 07 30

LIFE
904 07 30
Wah ha ha! What do you want, little man? Do you have something to ask me?

The Legend Of Zelda: A Link To The Past

■ **Year:** 1991 ■ **Platform:** SNES

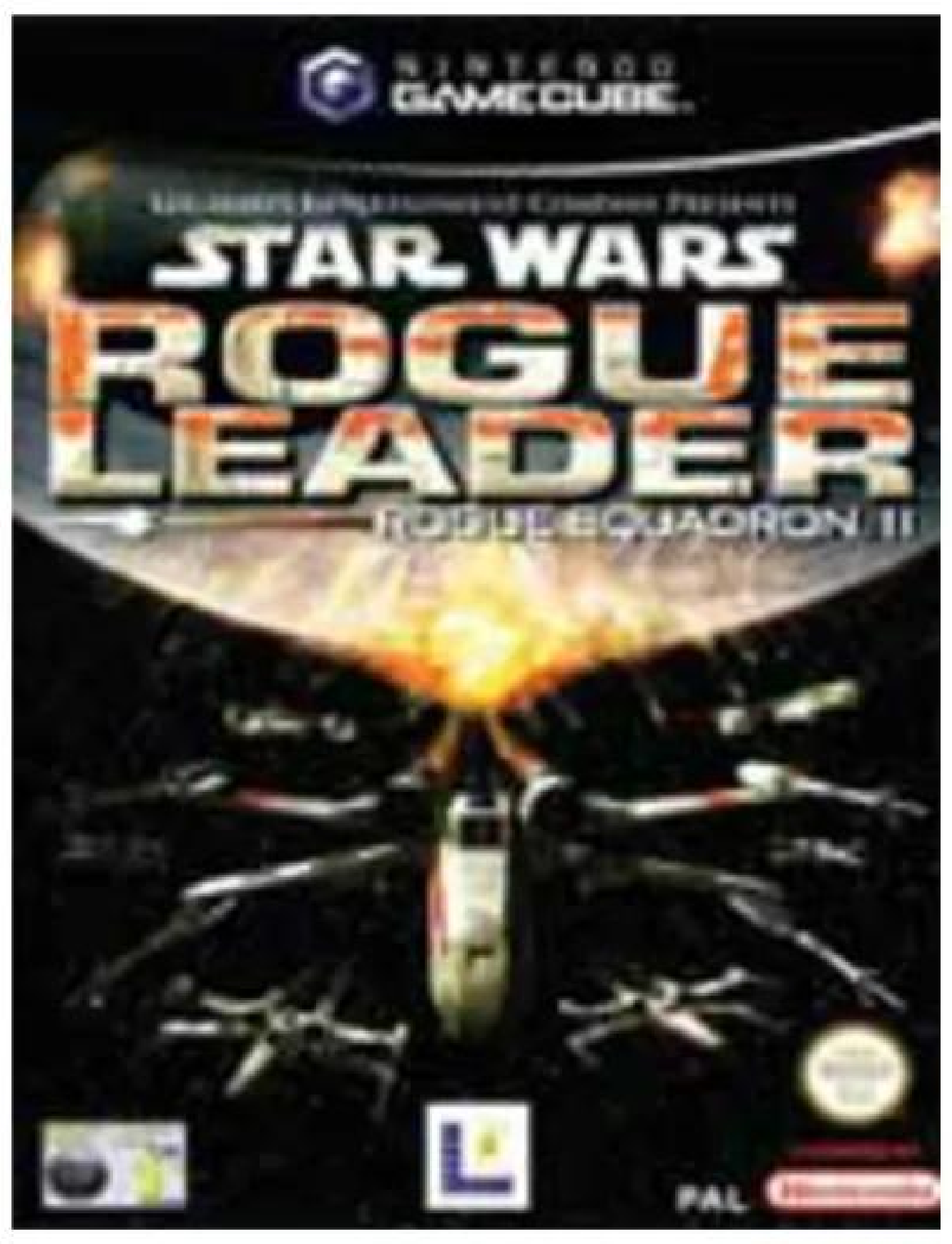
67 **After experimenting with a different style** in *Zelda II: The Adventure Of Link*, Nintendo went back to the original formula for the series' 16-bit debut, to stunning effect. Using the power of the new SNES hardware, Nintendo could create dramatic scenes with rain and fog, and the story was told in more detail than ever before. Meanwhile, Link's quest to rescue Zelda and save Hyrule would take him to another dimension, as he visited an alternate 'dark world' that mirrored his own. Many feel it's the best of the series, and it's telling that Nintendo didn't even try to top it until it had a whole new technological toolbox.

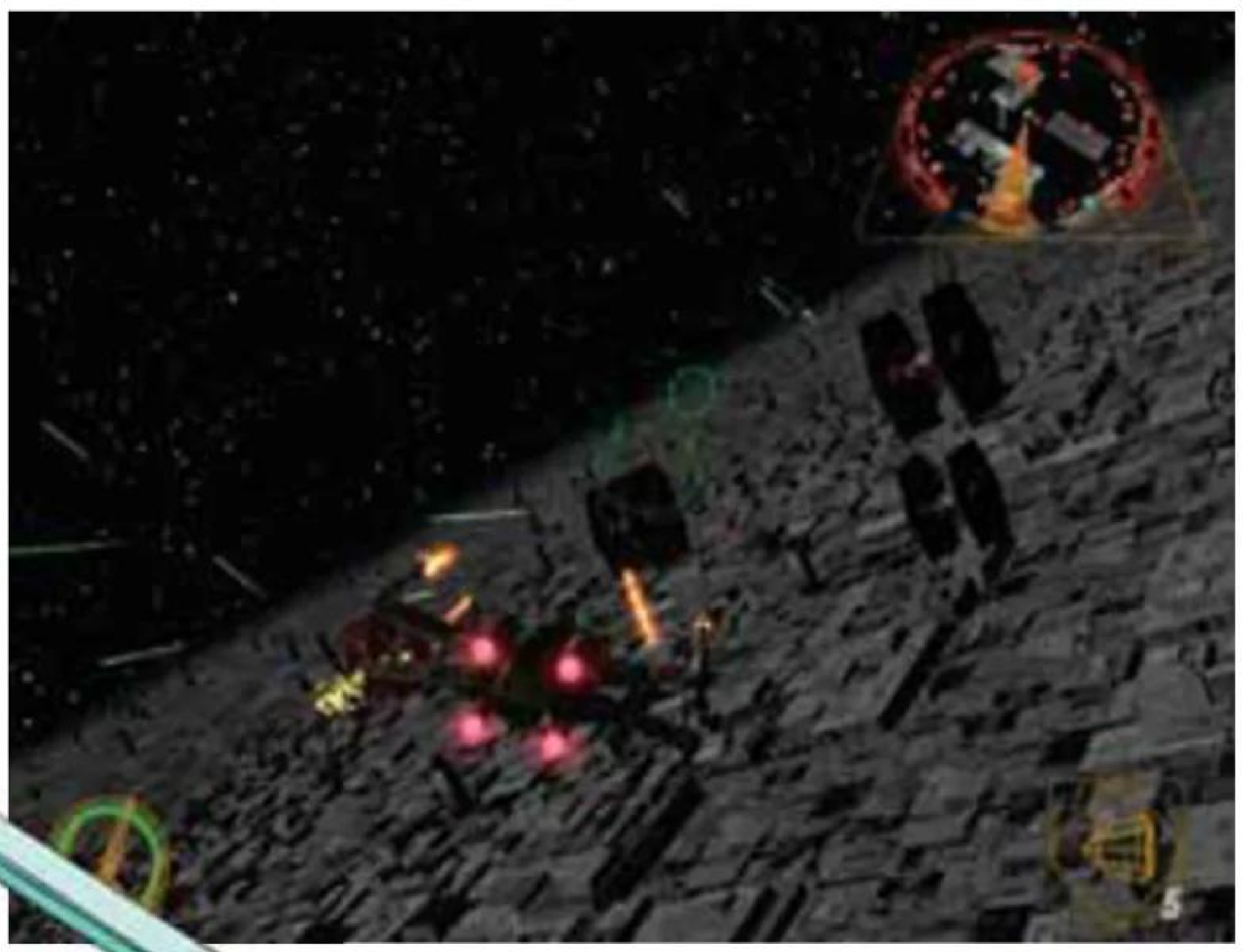


Star Wars Rogue Squadron II: Rogue Leader

■ **Year:** 2001 ■ **Platform:** GameCube

66 **Fans had been thrilled** with the original *Star Wars: Rogue Squadron*, which was a well designed space combat game with impressive N64 visuals. But the sequel absolutely blew it away, demonstrating the power of the GameCube with the most authentic *Star Wars* experience that had ever been seen on a home console. The game design hadn't changed a great deal, but every X-Wing shot sounded as crisp as you could hope for, and every detail of the Death Star seemed to have been recreated in loving detail. Forget *playing Star Wars* – when you play as Rogue Leader, the immersion is great enough that you might as well be Luke Skywalker himself.





Metroid Fusion

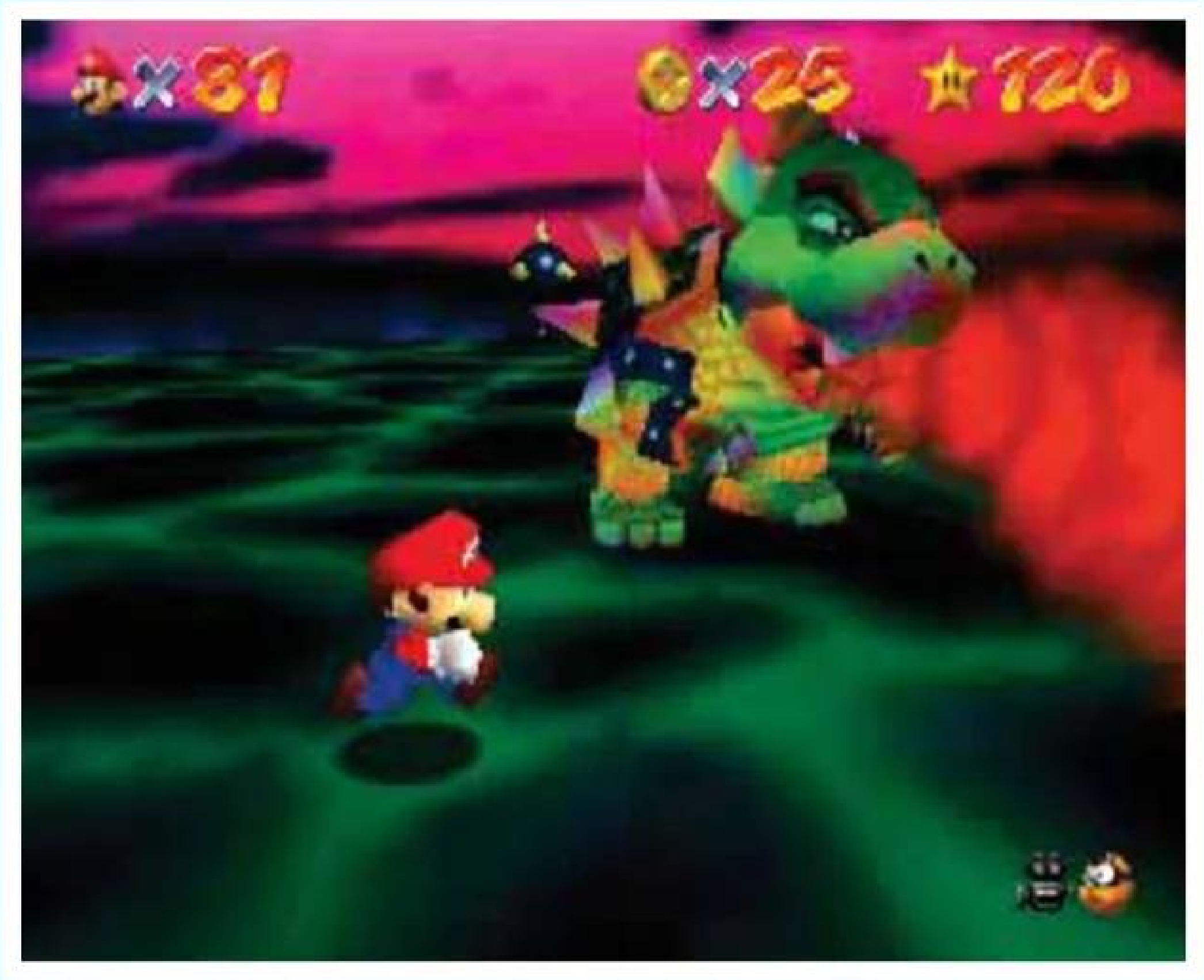
Year: 2002 **Platform:** Game Boy Advance

65 **Although many point** to *Metroid*'s non-linear map and acquisition of new abilities as its signature, early games in the series had always been marked by a sense of isolation – Samus Aran was alone, and by extension so were you. *Metroid Fusion* turned that on its head by introducing the SA-X, a villainous doppelganger that stalks the real Samus throughout the game, only to unleash potentially deadly attacks just when you least expect them. Worse yet, it's just as powerful as a fully powered-up Samus, and for much of the game that puts the real deal at a distinct disadvantage. Being alone suddenly seemed far more appealing after playing *Metroid Fusion*.

Super Mario 64

Year: 1996 **Platform:** Nintendo 64

64 **It's hard to overstate the impact** that *Super Mario 64* had on videogames back in the mid-Nineties. Most developers were still getting to grips with 3D game design, only for Nintendo to come along and deliver an absolute masterclass – everything from character movement to the camera system was leagues ahead of what any other team was putting out, to the point that it might just be the game we've most often seen cited as an influence by other developers. Just controlling Mario was a joy, and the designers cleverly recognised that 3D movement fundamentally changed the game. Instead of linear obstacle courses, *Super Mario 64*'s courses had no single end point and instead supported a variety of different objectives, many of which were extraordinary in their creativity. Even today, this classic remains the benchmark by which all 3D *Mario* adventures are judged, proving its enduring legacy as a classic platform game.



63 Zack & Wiki: Quest For Barbaros' Treasure

Year: 2007 **Platform:** Wii

This criminally overlooked adventure game revives the old point-and-click formula using the Wii Remote in place of a mouse. Taking control of the boy pirate Zack, you choose which objects to investigate, then use them to solve puzzles by mimicking the action you wish to perform using the motion controls. It sounds silly, but it's an inventive and clever use of the technology.

62 Shadowrun

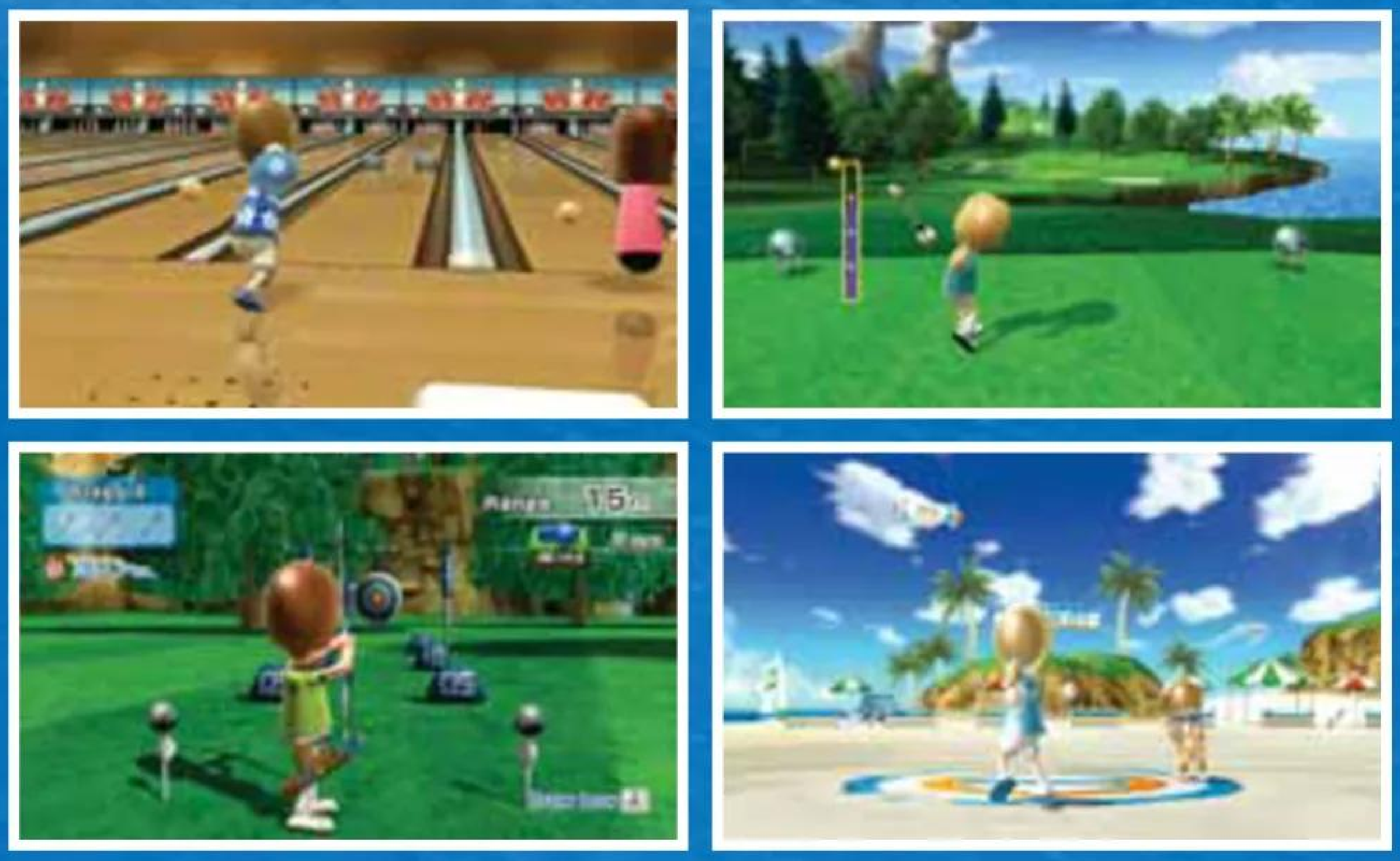
Year: 1993 **Platform:** SNES

This isometric action-RPG borrows its setting from the popular pen-and-paper RPG of the same name, drawing heavily on cyberpunk themes. The noir themes were unusual in videogames at the time, and the cursor-based interaction system gave you the ability to quickly shift from pressing pedestrians for information to defending yourself from the gun-toting baddies lurking in the shadows.

61 Kid Icarus: Uprising

Year: 2012 **Platform:** 3DS

The most unlikely Nintendo comeback of the decade was driven by Masahiro Sakurai's desire to create a third-person shooter, which he felt would show off the unique capabilities of the 3DS. Though it was a far cry from past entries and had some control problems, it was well received by critics and succeeded in highlighting the strengths of the hardware.



Wii Sports Resort

■ **Year:** 2009 ■ **Platform:** Wii

60 **The original *Wii Sports*** was the game that sold the Wii – a game so simple that anyone could grasp it, thanks to the gesture-based control that mimicked the actions of the sports it depicted. But it's the sequel we're recommending here, as it massively expanded on the range of sports available, smartly retaining the best ones from the original – bowling and golf – and adding a bunch more to reach a total of 12, compared to just five in the first game. The game also supported the Wii MotionPlus technology, which enabled true 1:1 motion tracking. Gone were the broad and somewhat imprecise swipes of the regular controller, as players now had a much finer degree of control over their Mii's movements. The result was a game that was just as intuitive as its predecessor, but one which offered greater scope for players to develop and improve their technique.

59 Super Metroid

■ **Year:** 1994 ■ **Platform:** SNES

The original *Metroid* was a brilliant game thanks to its exploration-based platforming and oppressive atmosphere, but *Super Metroid* took the formula to new heights with improved visuals, an amazing soundtrack and a larger game world. The auto-mapping feature was also a hugely welcome improvement. Whether you're playing it for the first time or the 50th, it's an incredible experience.

58 Final Fantasy Tactics Advance

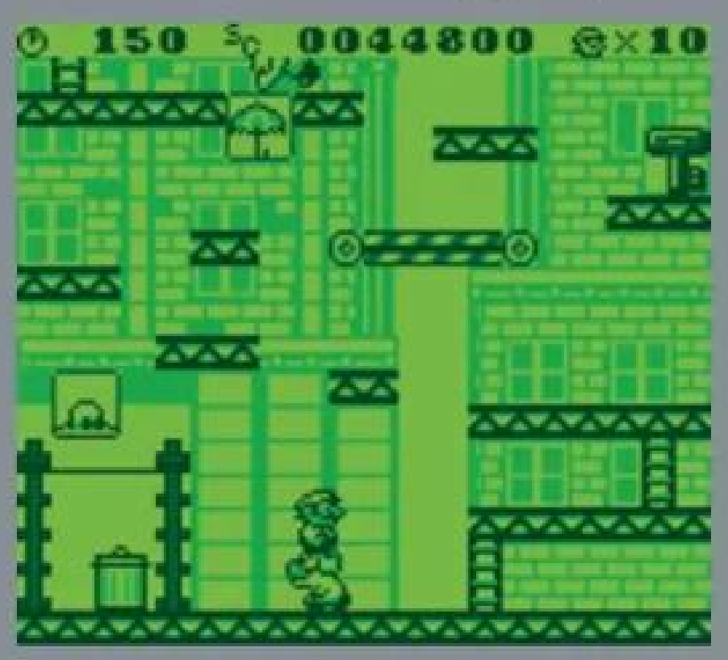
■ **Year:** 2003 ■ **Platform:** Game Boy Advance

Fans of storyline typically flock to the main *Final Fantasy* games, but RPG fans wanting rich battle experiences often prefer the *Final Fantasy Tactics* series. This isometric strategy RPG has a standalone plot, so you can jump in with no prior knowledge, and the battles are spiced up by the law system that prohibits and rewards certain actions.

57 Donkey Kong

■ **Year:** 1994 ■ **Platform:** Game Boy

This is no straight conversion of the arcade classic, but rather a full re-imagining of the *Donkey Kong* concept that quickly blossoms into an incredible puzzle platformer. Over the course of 101 stages, Mario must manipulate objects, bash bosses and perform daring leaps using some of his new jumping techniques, all to rescue Pauline from the angry ape's hairy paws.



56 Pokémon Snap

■ **Year:** 1999 ■ **Platform:** Nintendo 64

While players had plenty of fun training their Pokémon, it wasn't until *Pokémon Snap* that they really had a chance to watch them be cute, funny and occasionally bizarre as they acted naturally. Cast as a photographer, your goal was to get the best snapshots of Pokémon in the wild, luring or antagonising them as necessary to get the perfect pose.

55 Kid Icarus

■ **Year:** 1986 ■ **Platform:** NES

Pit's first adventure shows you how different a game can be when genre conventions have yet to be established. This platform game revels in its many vertical stages, and allows Pit to wrap around the playfield, entering on the left of the screen after he leaves the right side. It's a strange experience today, but NES fanatics swear by it.

54 Shovel Knight

■ **Year:** 2014 ■ **Platform:** Wii U

Shovel Knight sought to recreate the thrills of NES platformers like *DuckTales*, *Mega Man* and *Castlevania III*. But the developer Yacht Club Games knew that full authenticity was a fool's choice, so it did graphical things the NES couldn't, and avoided repeating the flaws that the classics did possess. The result? A game that matches the rosy tint of your glasses.

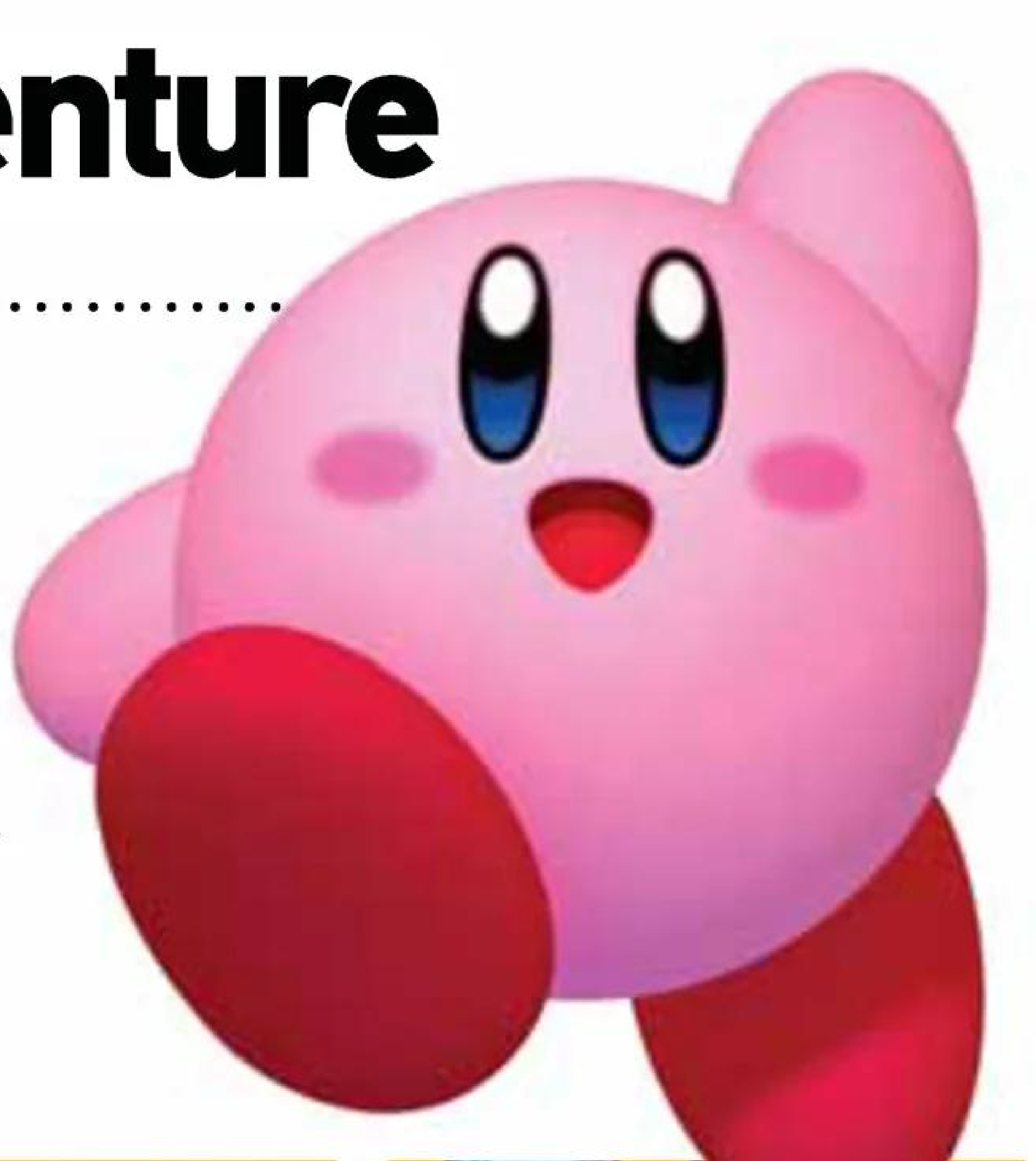
53 Super Mario Kart

■ **Year:** 1992 ■ **Platform:** SNES

Nintendo's attempt to create a multiplayer *F-Zero* never bore fruit on the SNES, as the system couldn't handle a map of the required size while running split-screen multiplayer. But the project that came out of it was even more valuable, as *Mario Kart* is arguably gaming's most successful franchise spin-off. Many favour this original entry in the series, as driving skill played a greater role in race results than the items picked up along the way.

Kirby's Adventure

■ **Year:** 1993 ■ **Platform:** NES



52 **In his Game Boy debut,** Kirby had been a cute but slightly unremarkable character – he could inflate himself like a balloon and suck up enemies, but that was it. His first home console appearance was the game that really defined him, as it was here that he gained his copy ability. By swallowing enemies, Kirby could use their abilities, giving him access to a large range of moves without the need for convoluted controls or a contrived power-up system. The game was a technical marvel too, with colourful graphics that showed that Nintendo's 8-bit hardware could still turn out an attractive game, some ten years after it was first engineered.

KIRBY :
SCORE : 0004900
FIRE
×04

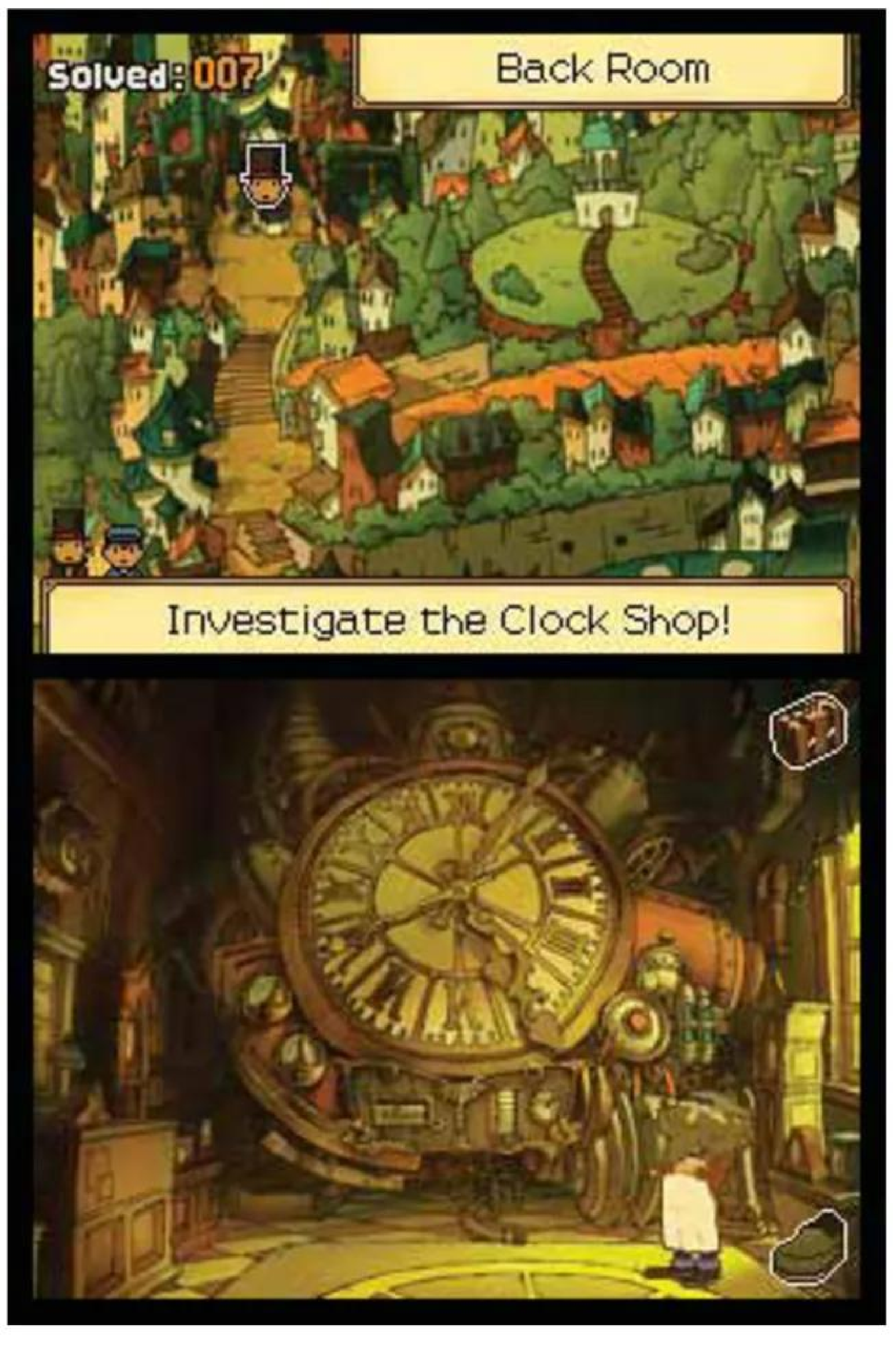
KIRBY :
SCORE : 0016120
FIRE
×05

KIRBY :
SCORE : 0029870
×05

Professor Layton And The Lost Future

■ **Year:** 2008 ■ **Platform:** DS

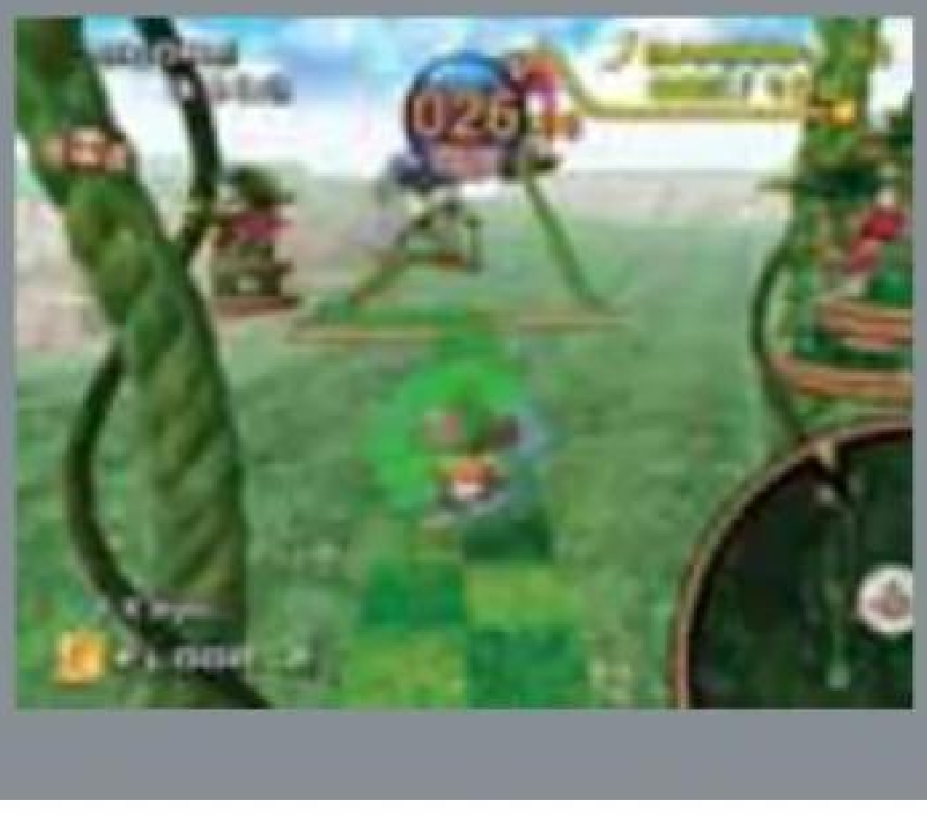
51 **The third game in the popular *Professor Layton* series** sees the puzzle-solving professor meeting a future version of his apprentice, Luke. Things have gone terribly wrong in his time, and he needs Layton's help to set things right again. Like the previous *Professor Layton* games, this title plays out as an adventure featuring plenty of animated cut scenes, conversations with the locals and of course, a variety of puzzles. These fiendish brainteasers required keen eyesight, a logical thought process and some mathematical skill to solve, and proved to be perfect for kids, seasoned gamers and even older players that wanted a new challenge to go alongside the likes of *Dr Kawashima's Brain Training*.



50 Super Monkey Ball

■ **Year:** 2001 ■ **Platform:** GameCube

All you ever have to do in *Super Monkey Ball* is guide your capsule-bound simian through a set of goalposts. It should be easy, but the game features maddening obstacles and demands extraordinary precision to navigate them – it's a fantastic update of the *Marble Madness* formula for the 21st Century, with brilliant multiplayer mini games as a cherry on top.



49 F-Zero X

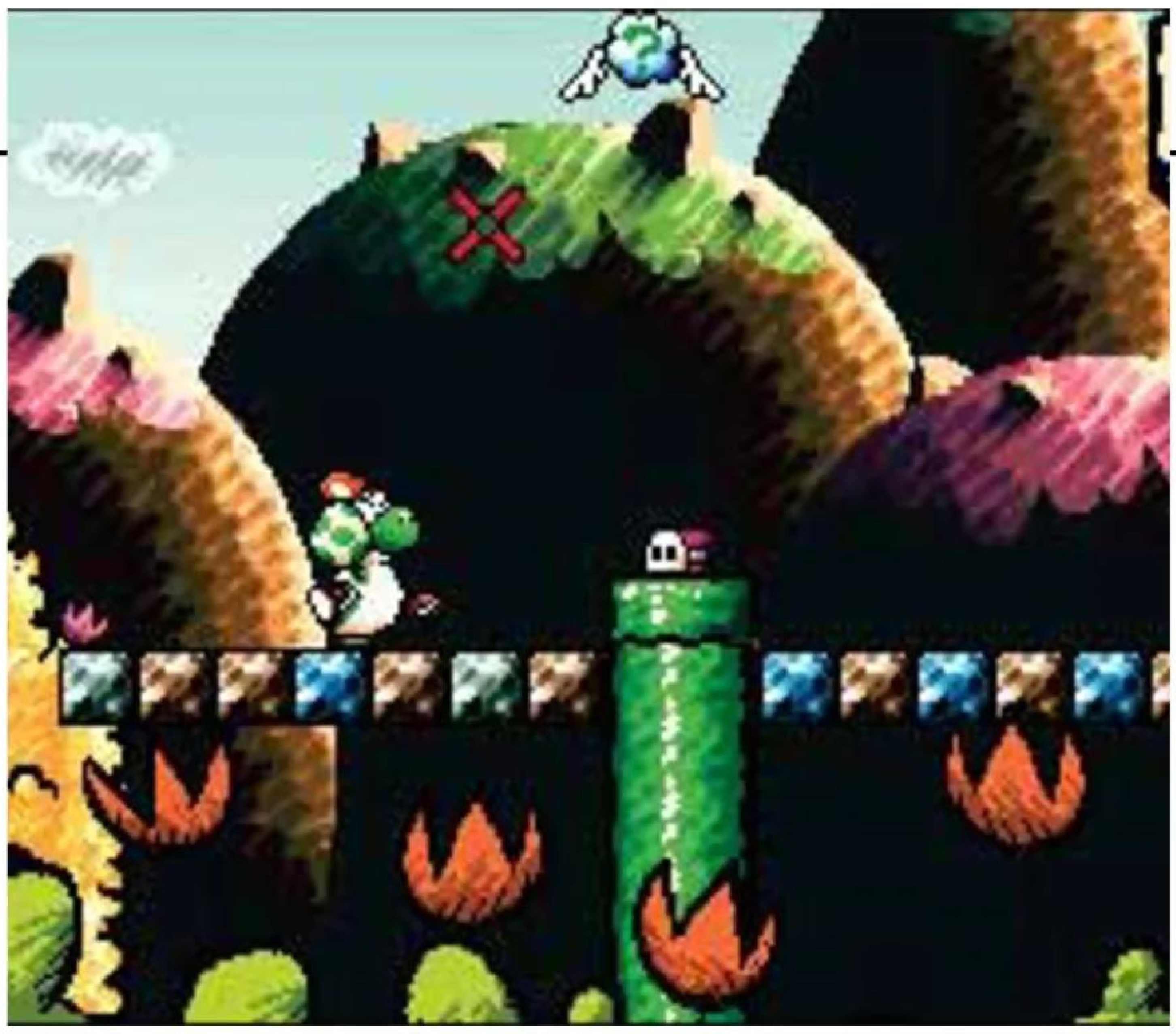
■ **Year:** 1998 ■ **Platform:** Nintendo 64

Although the N64 was powerful in its day, Nintendo had a choice – it could have a graphically detailed futuristic racer, or it could have one that was fast and ran at 60 frames per second. The developer chose the latter. It worked out – the minimalist look has aged gracefully and the smooth update means it still feels great to play.

48 Super Mario Galaxy 2

■ **Year:** 2010 ■ **Platform:** Wii

Mario doesn't often get direct sequels – and we're not sure why, because this follow up to the interplanetary platformer is ace. As before, Mario can traverse all the way around 3D planets, but this time he's got new ice and flying power-ups, and Yoshi makes his welcome return. It's more difficult than the original game, but features assistance for struggling players.



Yoshi's Island

■ **Year:** 1995 ■ **Platform:** SNES

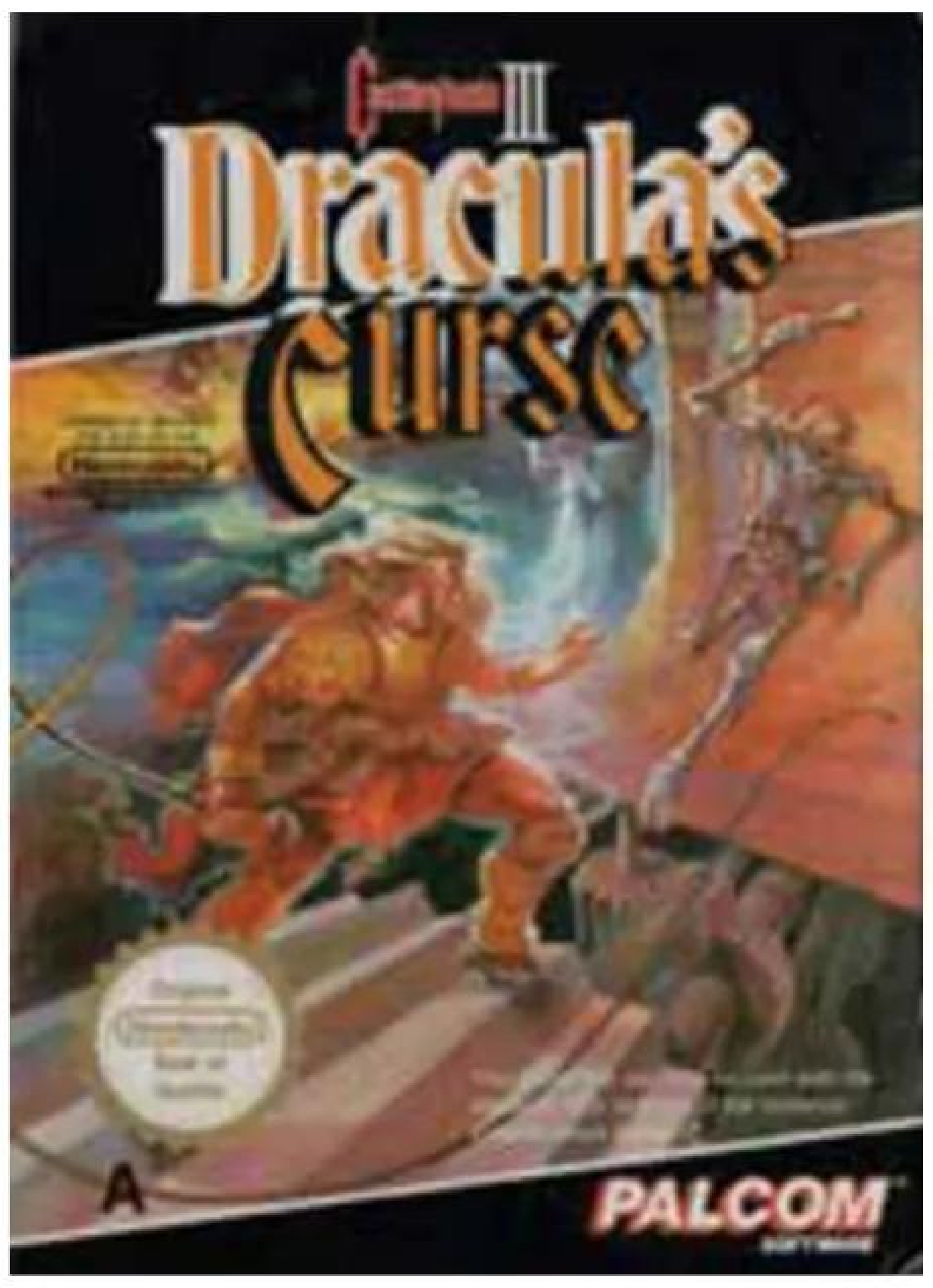
47 **Serving as one last hurrah** before the Mario team moved over to the N64 for good, *Yoshi's Island* embraced the contradictory ideals of chasing a hand-drawn, crayon sketch aesthetic while including the high-performance Super FX 2 chip to push technically impressive effects. But while the graphics were lovely, as usual it was the game design that was the real draw. Yoshi's need to keep hold of Baby Mario focused the player, while allowing him to be constantly recovered lowered the difficulty compared to *Super Mario World*. The usual clever stage design and some imaginative sequences where Yoshi turns into vehicles made it an unmissable debut for a new platform star.

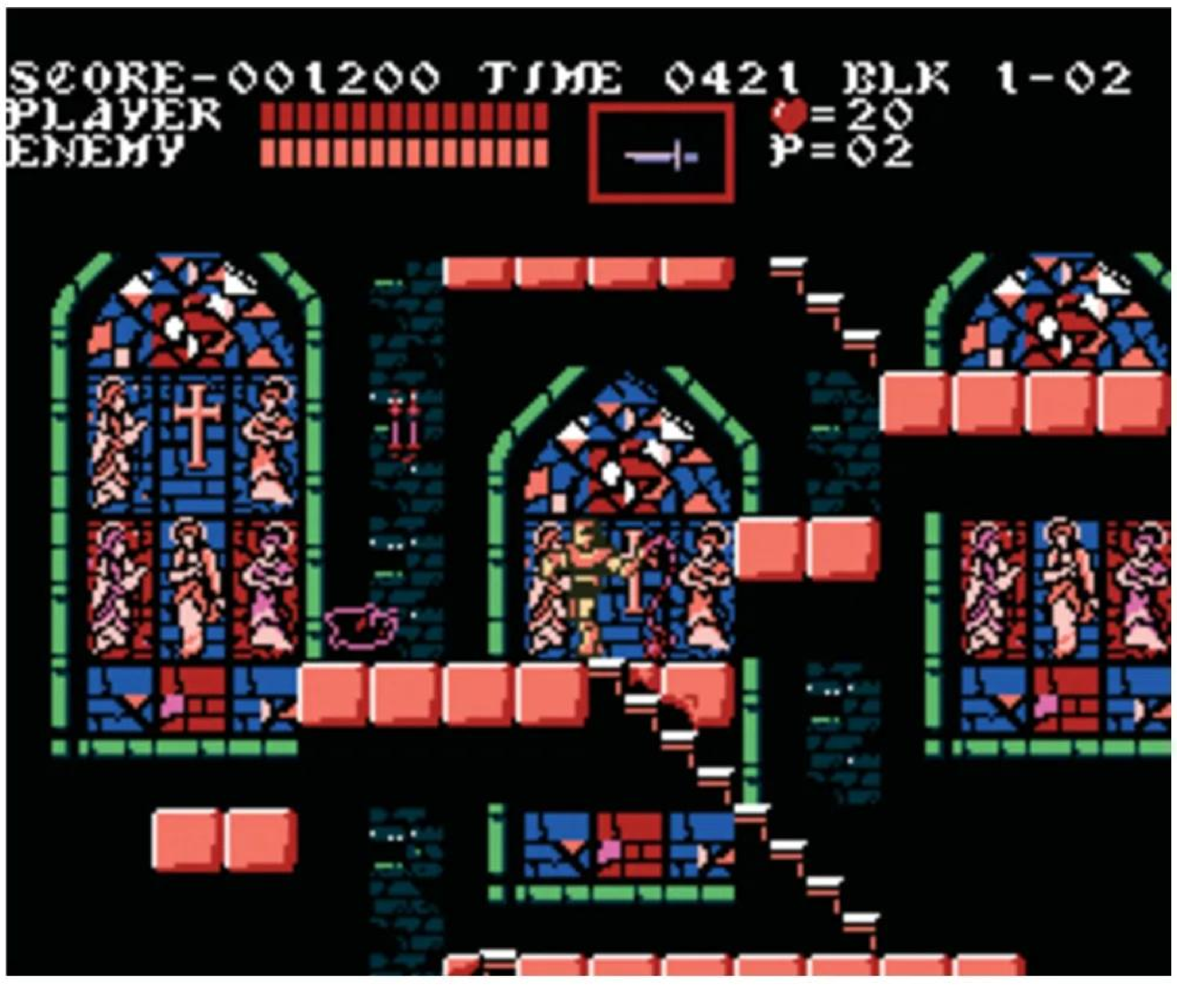
SUPER MARIO WORLD 2
YOSHI'S ISLAND
SUPER NINTENDO
PAL VERSION

Castlevania III: Dracula's Curse

■ **Year:** 1989 ■ **Platform:** NES

46 **The last of the *Castlevania* games** to appear on the NES follows Trevor Belmont's attempt to slay the most notorious of all vampires. While the game adopts the template of the original *Castlevania* with players wandering through challenging platform stages and killing off standard horror monsters, it adds to it tremendously. Branching paths through the game are present, meaning you'll require multiple sessions to see everything, and the game includes extra playable characters with their own abilities. The game's soundtrack is one of the system's best, but do seek out the Japanese version if you can – the extra sound channels afforded by the Famicom hardware add greatly to the atmosphere.





Super Smash Bros Melee

■ **Year:** 2001 ■ **Platform:** GameCube

45 **The first instalment** of Nintendo's unconventional crossover fighting festival was popular, but the sequel's expanded cast and improved visuals ensured that it found an even greater audience. *Super Smash Bros Melee* is first and foremost a party game, with players encouraged to mix it up in crazy stages with items that drastically change the outcome of battles. But in their drive to best one another, a certain section of the player base discovered that the game has a very high skill ceiling, giving the game an unintended second life as a fiercely competitive fighting game that became a tournament mainstay. This scene has kept the game alive for the best part of two decades, and allowed it to remain relevant where its sequels have faded from attention, as some very high-level players love the glitches and balance quirks that can only be found in this version of the game.

Astro Boy: Omega Factor

■ **Year:** 2003 ■ **Platform:** Game Boy Advance

44 **Few developers understood action games** as well as Treasure in its heyday, and this platform beat-'em-up is testament to that. As you guide the famous robot boy through various stages, you'll constantly be charging and using a variety of special attacks to stun, repel and destroy huge numbers of enemies. There are plenty of crazy bosses, you'll get to meet loads of Osamu Tezuka's characters, and the visuals push the hardware to breaking point (really, check out some of the slowdown). The highlight is that just when you think the game is ending, the quest opens up and you get to revisit past stages to set history right and avert a bad ending.

LIFE
SUPER
05
SCORE
00004750
TIME
00:11

LIFE
SUPER
04
SCORE
00035120
TIME
00:18

43 Mario Kart DS

■ **Year:** 2005 ■ **Platform:** DS

This entry in the enormously popular racing series employed a back-to-basics approach, dropping some of the experiments from *Mario Kart: Double Dash!!* and bringing back plenty of old favourite courses. But its own new additions were very welcome, as it introduced online multiplayer and a variety of great tracks like Waluigi Pinball, Tick-Tock Clock and Peach Gardens.

42 Super Mario Land 2: 6 Golden Coins

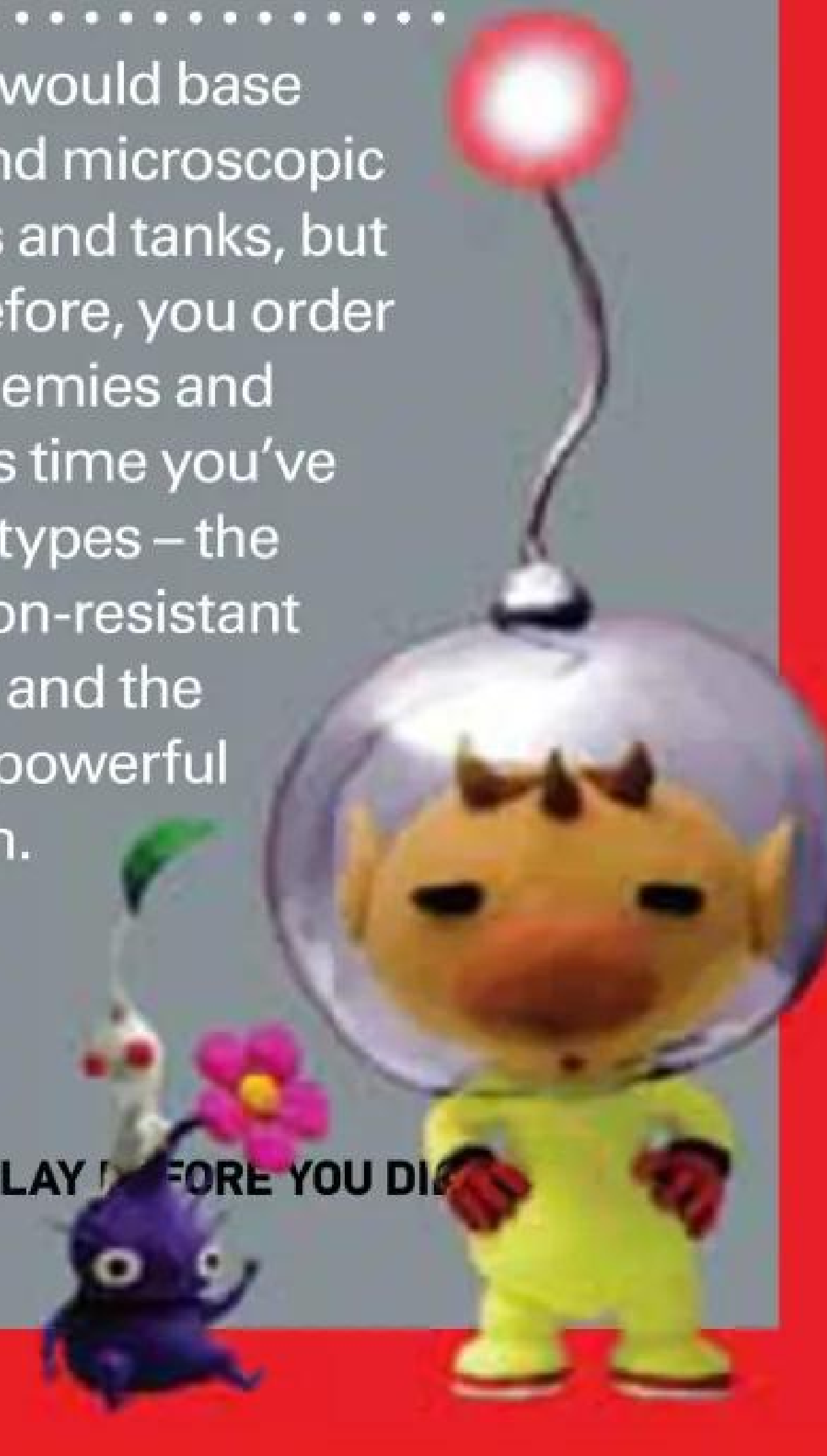
■ **Year:** 1992 ■ **Platform:** Game Boy

After the experimental antics of the original *Super Mario Land*, this sequel brought a more conventional *Mario* platform adventure to the handheld audience, featuring detailed sprites and the unique Bunny Mario transformation. The game also marks the first appearance of everyone's favourite greedy brute Wario, who is trying to steal Mario's castle for himself.

41 Pikmin 2

■ **Year:** 2004 ■ **Platform:** GameCube

There aren't many companies that would base their real-time strategy game around microscopic plant-like beings instead of soldiers and tanks, but that's why we love Nintendo. As before, you order the Pikmin to grab things, attack enemies and more, but this time you've got two new types – the speedy, poison-resistant white Pikmin and the sluggish but powerful purple Pikmin.



40 Super Punch-Out!!

Year: 1994 **Platform:** SNES

Boxing is a sport that struggles to translate well to videogames, but Nintendo solved the incompatibilities by simply ignoring the rules. *Super Punch-Out!!* pits you against cartoonish caricatures such as the reggae fighter Bob Charlie, kung fu kick expert Dragon Chan and the Turkish terror Bald Bull. Quick reflexes and smart pattern recognition are the keys to victory.

39 Space Station Silicon Valley

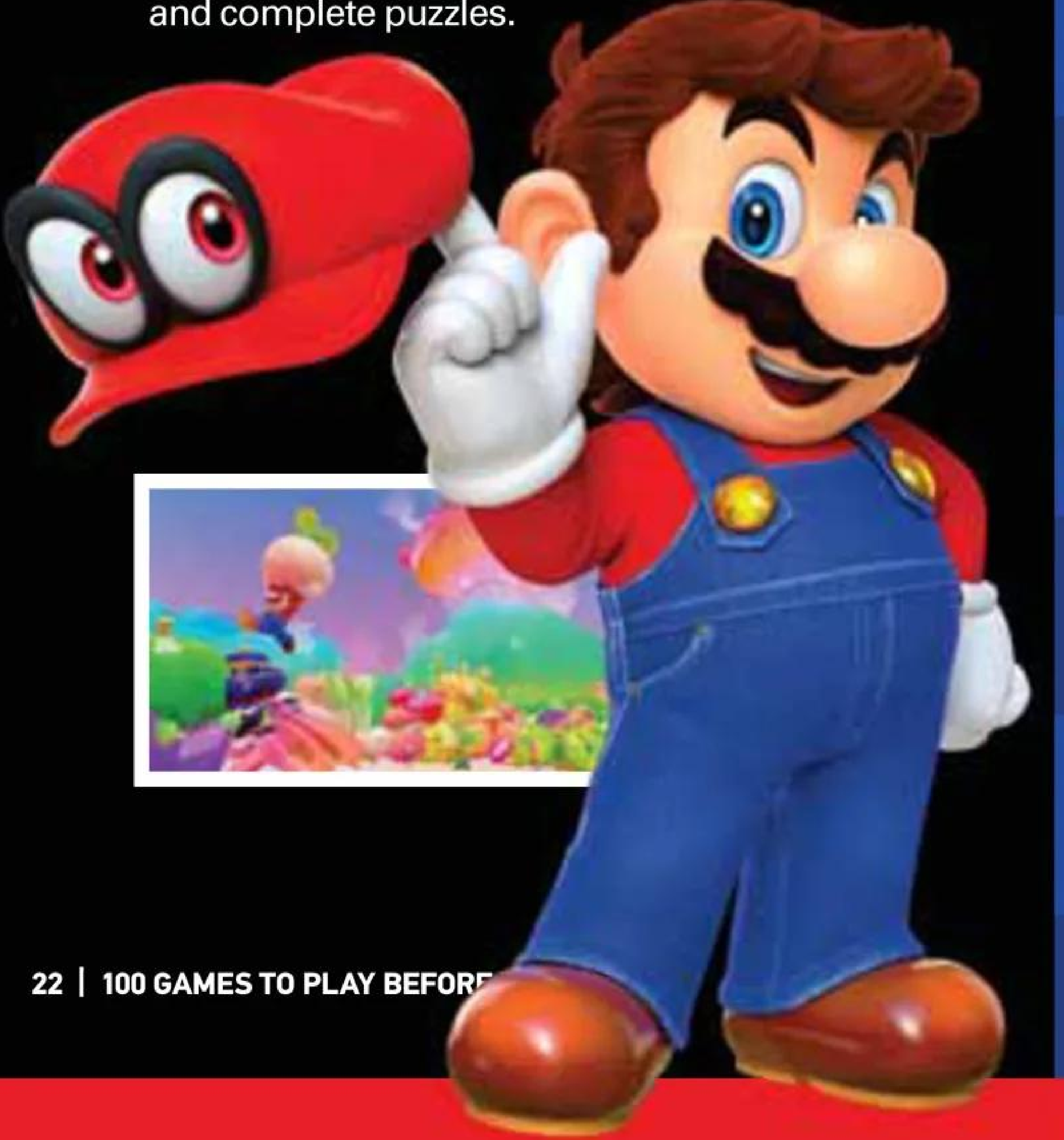
Year: 1998 **Platform:** Nintendo 64

If you want a job done properly, do it yourself – or so they say, but poor Evo can't do much by itself. But it can take possession of other creatures, allowing it to solve puzzles and try to solve the mystery of what happened aboard the space station. This quirky adventure features plenty of humour and some truly innovative ideas.

38 Super Mario Odyssey

Year: 2017 **Platform:** Switch

Mario's most recent 3D adventure is a real treat, incorporating open-world game design that allows you to traverse huge stages and achieve objectives whenever you want. The game's highlight is new pal Cappy, a hat that allows Mario to possess living things including frogs, Koopa Troopers and even colossal dinosaurs, in order to take control of them and complete puzzles.



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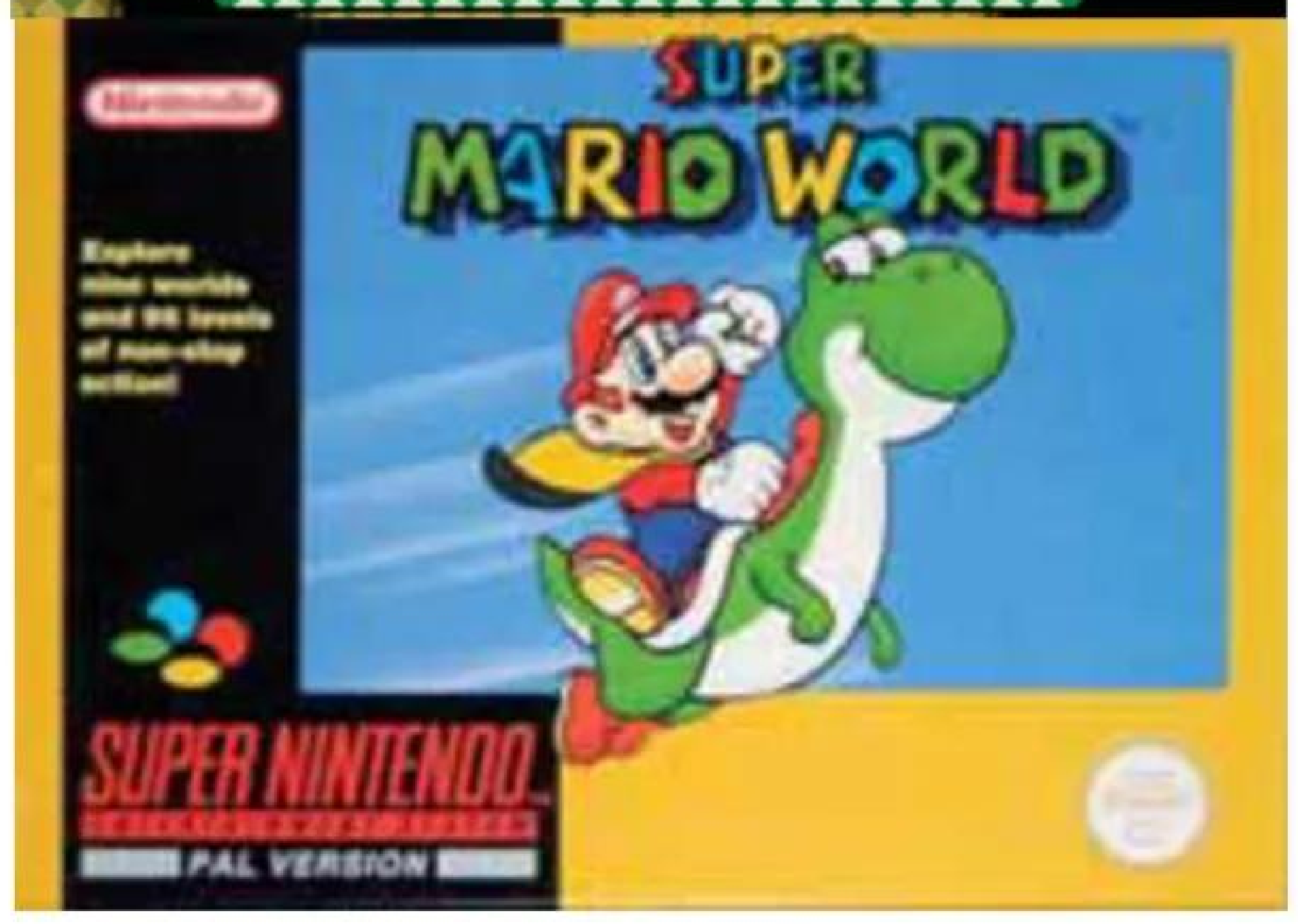

Super Mario World

Year: 1990 **Platform:** SNES

37 **Mario had many friends** before his SNES debut, but he didn't really have a proper sidekick. Thankfully *Super Mario World* remedied that by introducing Yoshi. As well as being able to ride the cute dinosaur, Mario could direct him to flick out his tongue and snatch enemies back into his gaping maw. Of course, that alone doesn't make *Super Mario World* great. What makes *Super Mario World* great is its incredible wealth of hidden secrets, with levels having multiple exits that lead to new areas with even more concealed goodies. Finding all of the game's 96 level exits is a true joy that will keep you occupied for ages.

Diddy Kong Racing

Year: 1997 **Platform:** Nintendo 64

36 **You'd be forgiven for wondering** why any system with a *Mario Kart* game would ever need any other kart racing offerings, but Rare answered that question emphatically with the incredibly fun *Diddy Kong Racing*. *Mario Kart 64* might have had road racing, but it didn't have hovercrafts and it certainly didn't have planes. *Diddy Kong Racing* also boasted an adventure mode, complete with honest-to-goodness boss battles. Plus, it was a good place to check out the Rare stars of the future, including a bear by the name of Banjo and some squirrel called Conker. Now, any chance that we could kindly get the Timber The Tiger platform game we've been waiting so patiently for?

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1ST
LAP 3/3
×5
TIME 01:41:69

35 Excitebike

■ **Year:** 1984 ■ **Platform:** NES

This motocross racing game is incredibly simple – match your bike's angle to the slope, avoid the grass and don't overheat your engine. But it's all so solidly put together and easy to play that you quickly get lost in the rhythm of the undulating slopes, trying to put together that one perfect run with an unbeatable time. It's still great fun to play today.

34 Wario Land 3

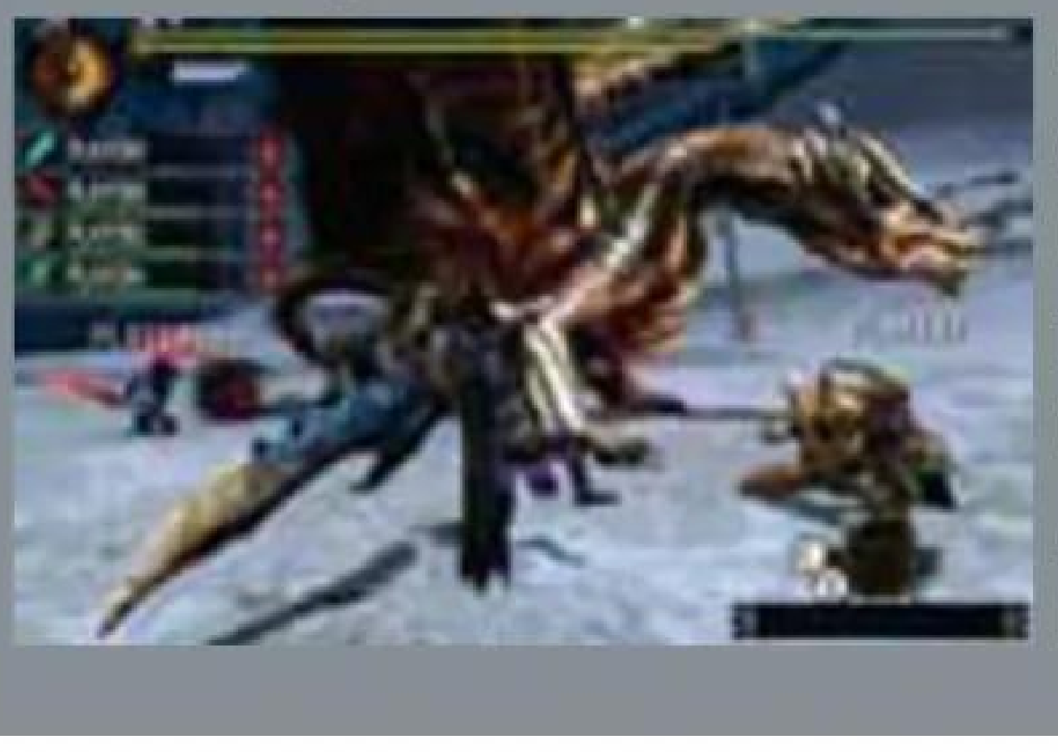
■ **Year:** 2000 ■ **Platform:** Game Boy Color

If you ever feel like a relaxing change of pace, here's a game to consider – in *Wario Land 3*, you'll never lose a life. That's not because it's extraordinarily easy, it's because getting hit is essential. Enemy attacks cause our anti-hero to float, bounce and smash through walls, giving him access to new areas. Wario is the best punching bag ever.

33 Monster Hunter 4 Ultimate

■ **Year:** 2015 ■ **Platform:** 3DS

The life of a hunter is simple – find a big scary creature, kill it to fulfil your quest goals, use the rewards to get better gear, then go out and kill something scarier. While this action-RPG series originated on consoles, it's the handheld space that's always suited it better; *Monster Hunter* really felt at home on 3DS.



Hey! You came from PALLET TOWN?

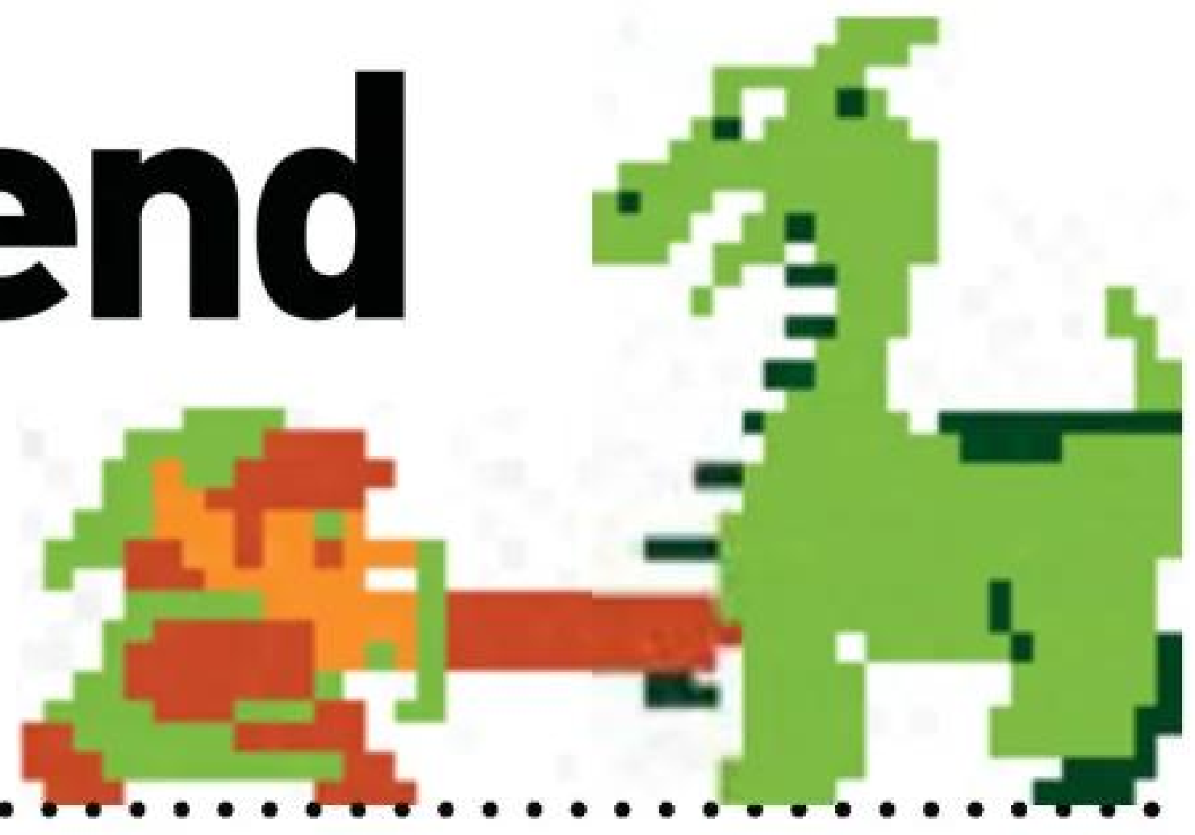
Pokémon Red/Blue

■ **Year:** 1996 ■ **Platform:** Game Boy

32 **Just when the Game Boy** was beginning to look a little bit tired in the mid-Nineties, this game turned into an enormous cultural phenomenon and gave the system a shot in the arm in Japan, before doing the same internationally a few years later. *Pokémon* – or *Pocket Monsters*, in its original Japanese form – tasks players with collecting 151 colourful critters, which can be trained to battle against one another. Any RPG of that length and quality would have been appreciated, but *Pokémon*'s design was truly inspired, turning RPG conventions on their heads. Random battles went from being an annoying interruption to a welcome chance to add a powerful ally to your party. What's more, the game took advantage of the system's portability by letting players get out and trade with one another – and to ensure they did, creatures were split across the versions. It's still just as compelling today.

IT'S DANGEROUS TO GO ALONE! TAKE THIS.

The Legend Of Zelda



■ **Year:** 1986 ■ **Platform:** NES

31 **To really get a feel** for how the first entry in this action-RPG series felt at the time, you need to play it without the temptation to look at a guide or a YouTube walkthrough. Cast your mind back to a simpler time, when information was hard to come by. Walk Link into the cave, grab that sword and shield, and then where do you go? Anywhere. That was the beauty of *Zelda* – it gave you a whole world to explore, mysteries to investigate and monsters to slay. The game made you feel like an adventurer and a hero, just like Link on the screen. Too few games do that today.

30 Battletoads

■ **Year:** 1991 ■ **Platform:** NES

While it looked like a typical scrolling fighter, Rare's cheeky alternative to the *Teenage Mutant Ninja Turtles* was anything but conventional. It's not only filled with a sly sense of humour, but also has imaginative boss fights and varies up the structure of its level design. Granted, it's tougher than old boots, but by goodness is it still fun to play through.

29 Ikaruga

■ **Year:** 2003 ■ **Platform:** GameCube

Recently re-released on Switch, this stunning shoot-'em-up is still considered to be one of the best in the genre. It has an exceptionally clever polarity system that allows you to absorb black or white bullets by flipping your ship to the same colour. It sounds easy, but the smart level structure and cleverly placed waves of enemies will keep you on your toes.

28 Pinball: Revenge Of The Gator

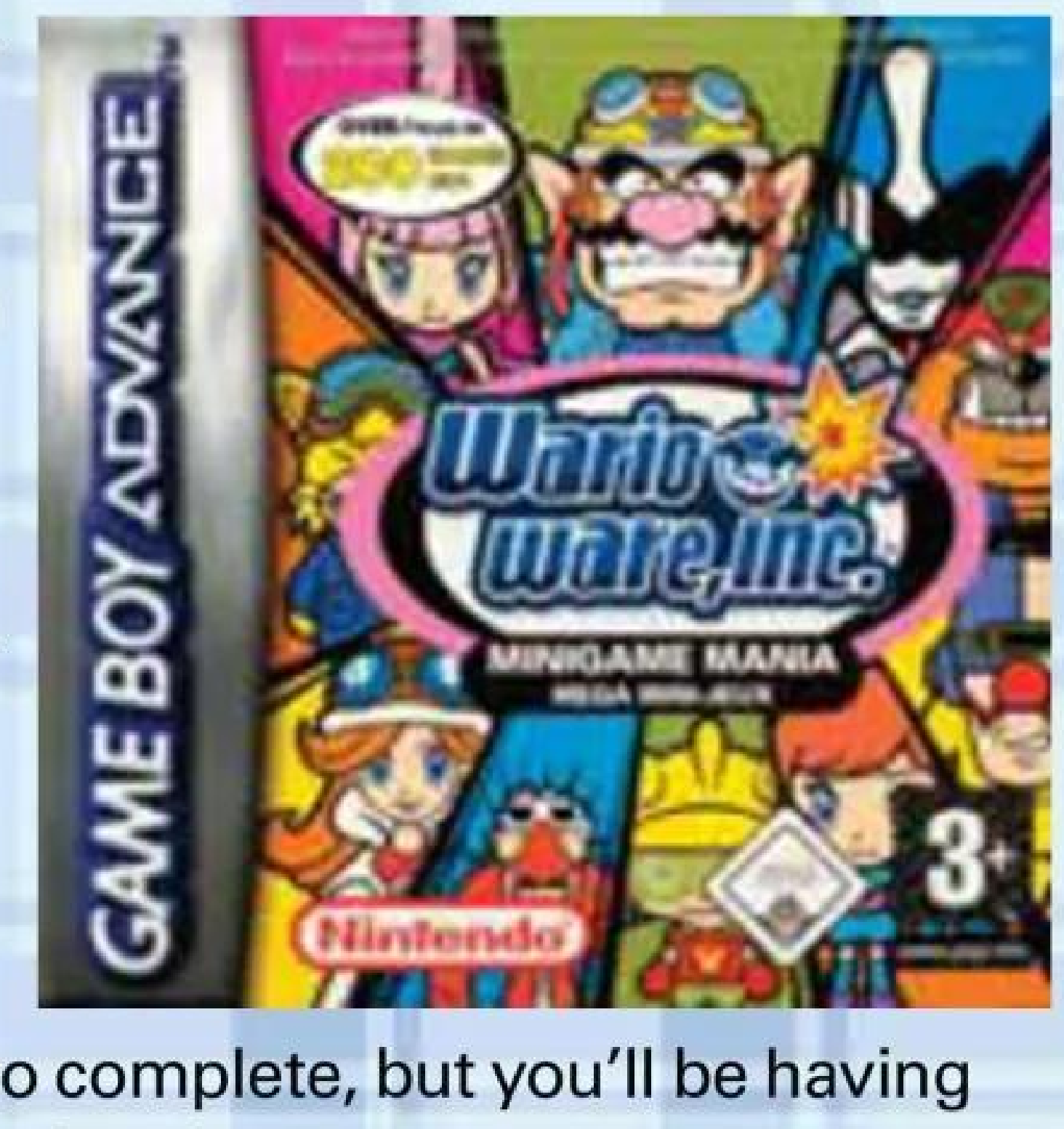
■ **Year:** 1989 ■ **Platform:** Game Boy

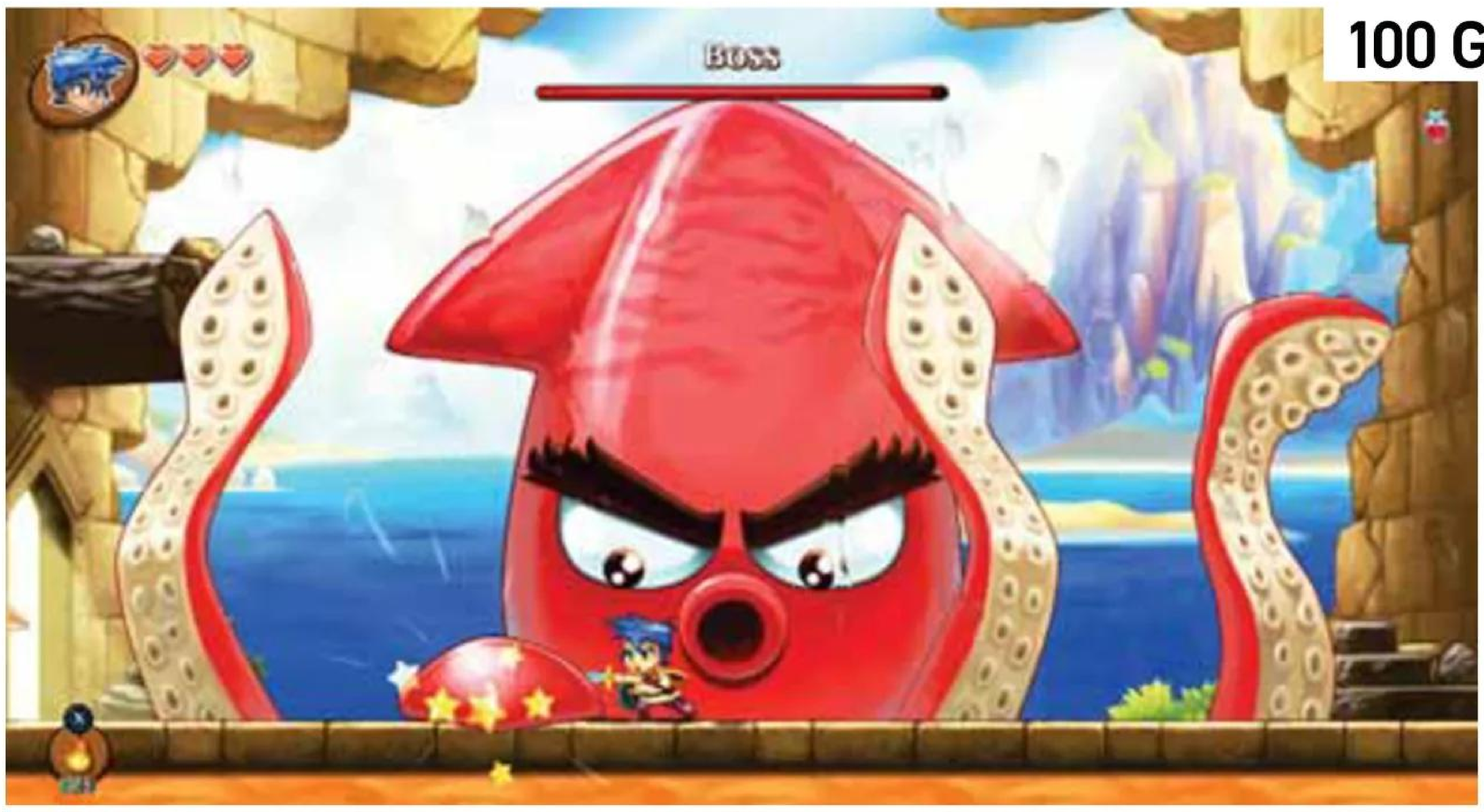
The Game Boy had a range of decent pinball games, but this remains our favourite. As you might have guessed by the title, it has a distinct reptilian theme with gators appearing across the large multi-screen table. The physics feel a little simple today, but the game still has plenty of charm and offers a great multiplayer experience.

WarioWare, Inc: Minigame Mania

■ **Year:** 2003 ■ **Platform:** Game Boy Advance

27 **The first entry in the *WarioWare* series** remains the best in our humble opinion. It's a series of simple games that need to be completed in a few short seconds and they range from the mundane to the bizarre. You might shake paws with a dog, help a lady sniff an unwelcome bogey back up into her nose or try and catch a pint as it's passed at you. A new character is introduced on each stage that typically showcases games based around a certain theme, from sports to classic Nintendo games. It won't take long to complete, but you'll be having so much fun you simply won't care about its brevity.

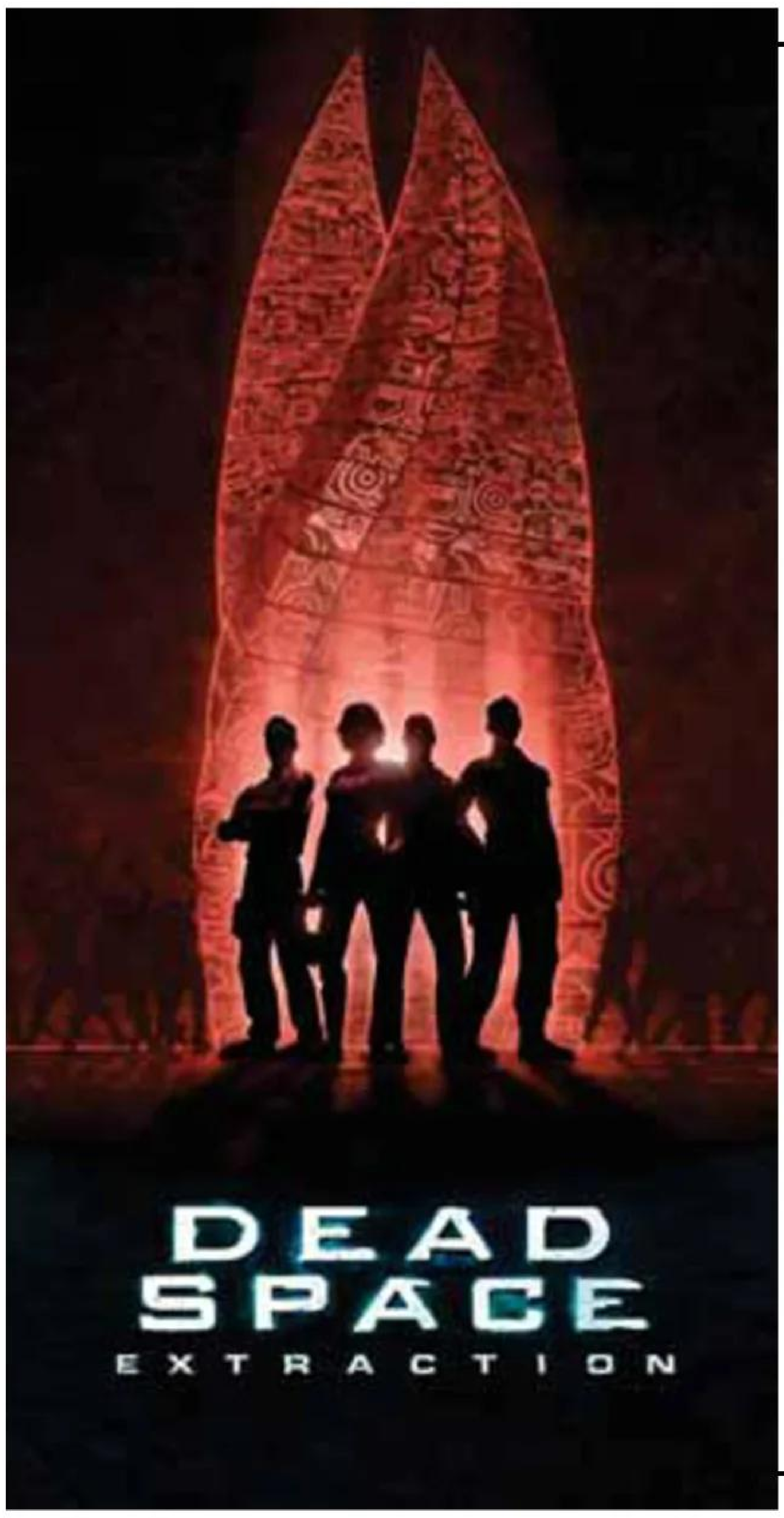




Monster Boy And The Cursed Kingdom

Year: 2018 **Platform:** Switch

26 **Originally planned as a sequel** to Game Atelier's *Flying Hamster*, a cancelled Kickstarter campaign and a team-up with FDG Entertainment led to this game becoming the latest instalment of the long-running *Monster World* series. It's a great fit for the game too, as *Cursed Kingdom* is effectively a fantastic homage to the wonderful *Wonder Boy III: The Dragon's Trap*. It's a metroidvania at its heart, with new areas opening up as you unlock new animal forms that range from a snake that can cling to walls, to a flying fire-breathing dragon and a pig that can use its snout to sniff out secrets. As your adventure continues, you'll have to continually switch forms in order to solve puzzles, leading to some truly head-scratching, but ultimately satisfying moments. Filled with familiar tunes from the popular series and boasting colourful, outrageous-looking visuals, *Cursed Kingdom* is an absolute delight. Don't miss it.



Dead Space: Extraction

Year: 2009 **Platform:** Wii

25 **This spin-off of the *Dead Space* series was tailor-made to suit the more modest aesthetics and unique control system of the Wii.** It's a fine trade-off delivering an exceptionally creepy horror experience and plenty of opportunity to put your Wii remote through its paces as you shoot down hordes of Necromorphs. Despite its light-gun origins, *Extraction* is a proper story-fuelled experience with interesting characters, and a constantly twisting plot that neatly ties to the original game.

24 Grand Theft Auto: Chinatown Wars

Year: 2009 **Platform:** DS

While the series never hit home Nintendo consoles, the DS did get this exceptionally good offering. With a distinctive cel-shaded style, *Chinatown Wars* is still a blast to play thanks to its decent story and interesting characters, some clever uses of the DS's touch screen and a ridiculously deep drug-dealing minigame. Portable violence in the palm of your hand.

23 Pilotwings

Year: 1990 **Platform:** SNES

Who would have thought that learning to fly could be so much fun? Nintendo EAD's game requires you to master several types of air-based contraptions (as well as skydiving) including jetpacks and hang gliders across progressively tougher courses. Please your instructors and you'll be able to take on one final dangerous mission to show off the many skills you've mastered.

22 Snake Rattle N Roll

Year: 1990 **Platform:** NES

Rare released some cracking games on the NES, but few are as bizarre as this brilliant isometric gem. The aim of the game is to slither across the large isometric levels (ideally with a friend in tow) and eat as many Nibbley Pibbleys as possible. Once you've eaten enough, you can head to the end-of-level scales, weigh yourself and reach the next stage. Hitting enemies causes your snake to lose a segment of its body, meaning you'll want to tackle each stage as carefully as possible.

21 Banjo-Kazooie

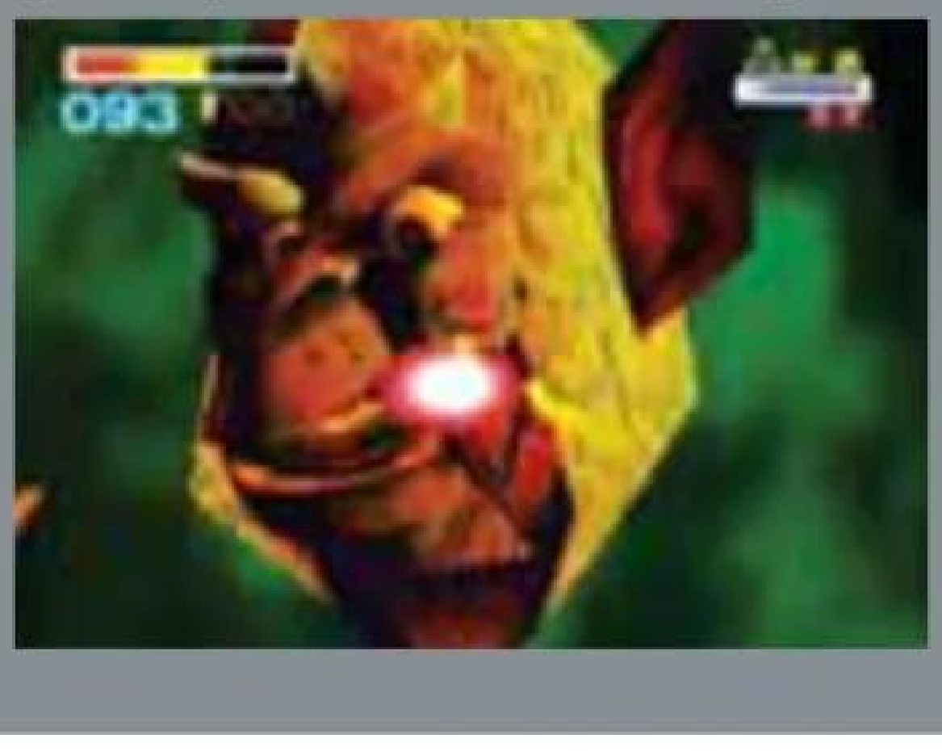
Year: 1998 **Platform:** Nintendo 64

The best N64 platformer that isn't *Super Mario 64* works largely because of the interplay between its two lead characters. The bickering between Banjo the bear and his bird partner Kazooie never gets old, while they share some great moves between them, which allow them to navigate the sandbox-styled worlds. It's easily the best game in the series and still holds up today.

20 Lylat Wars

■ **Year:** 1997 ■ **Platform:** Nintendo 64

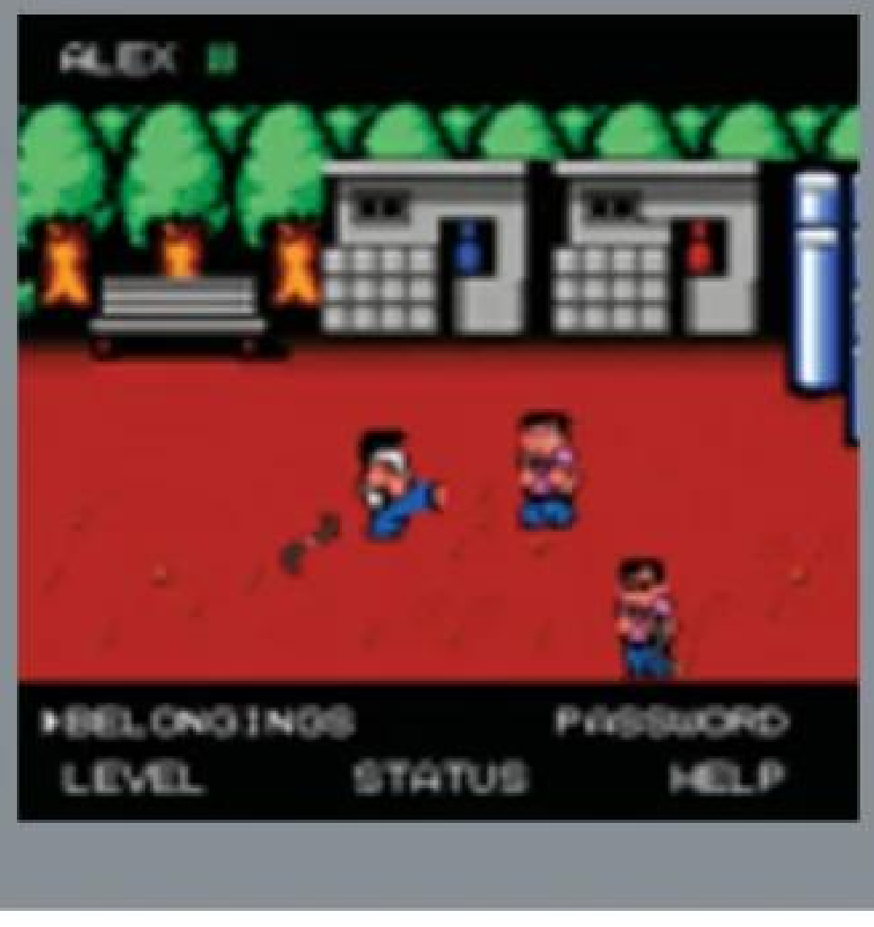
Nintendo's 64-bit sequel is still an incredible experience thanks to its epic boss battles, over-the-top set-pieces and slick aesthetic design. It effortlessly channels *Star Wars* and other space operas and offers plenty of solid shooting alongside an enjoyable multiplayer mode. If you fancy some portable entertainment you should consider picking up the polished port for 3DS.



19 Street Gangs

■ **Year:** 1989 ■ **Platform:** NES

The third game in Technos' popular Kunio-kun series also goes by the name *River City Ransom*. It's a fun multiplayer scrolling fighter that differentiates itself from similar NES games thanks to its sense of humour, unusual non-linear structure, varied weapons and the fact that you can visit numerous shops to buy items and food that will increase your abilities.



18 Super Castlevania IV

■ **Year:** 1991 ■ **Platform:** SNES

Masahiro Ueno's reboot of the original NES *Castlevania* remains a delightful gothic treat. Its Mode 7 sections continue to impress, there's plenty of variety on your way to Dracula's huge castle and the challenging bosses will give you plenty to sink your teeth into. It also has one of the finest soundtracks to ever emit from the Super Nintendo's sound chip.

Metroid Prime

■ **Year:** 2002 ■ **Platform:** GameCube

17

Despite utilising a first-person perspective, *Metroid Prime* never feels like an all-out shooter. Retro Studios ensures that the focus of Samus' quest is always on exploration first (just like the earlier games) and making the most out of her new skills, which slowly unlock more and more of the alien planet she visits. It cleverly blends puzzles with tight level design, offers some tremendous boss encounters, including plenty of classic *Metroid* villains, and has an incredible atmosphere that still makes it utterly compelling to play through today. It's also available on the Wii with motion-based controls and its two sequels, but the original version still works best for us.

GAMECUBE
METROID PRIME

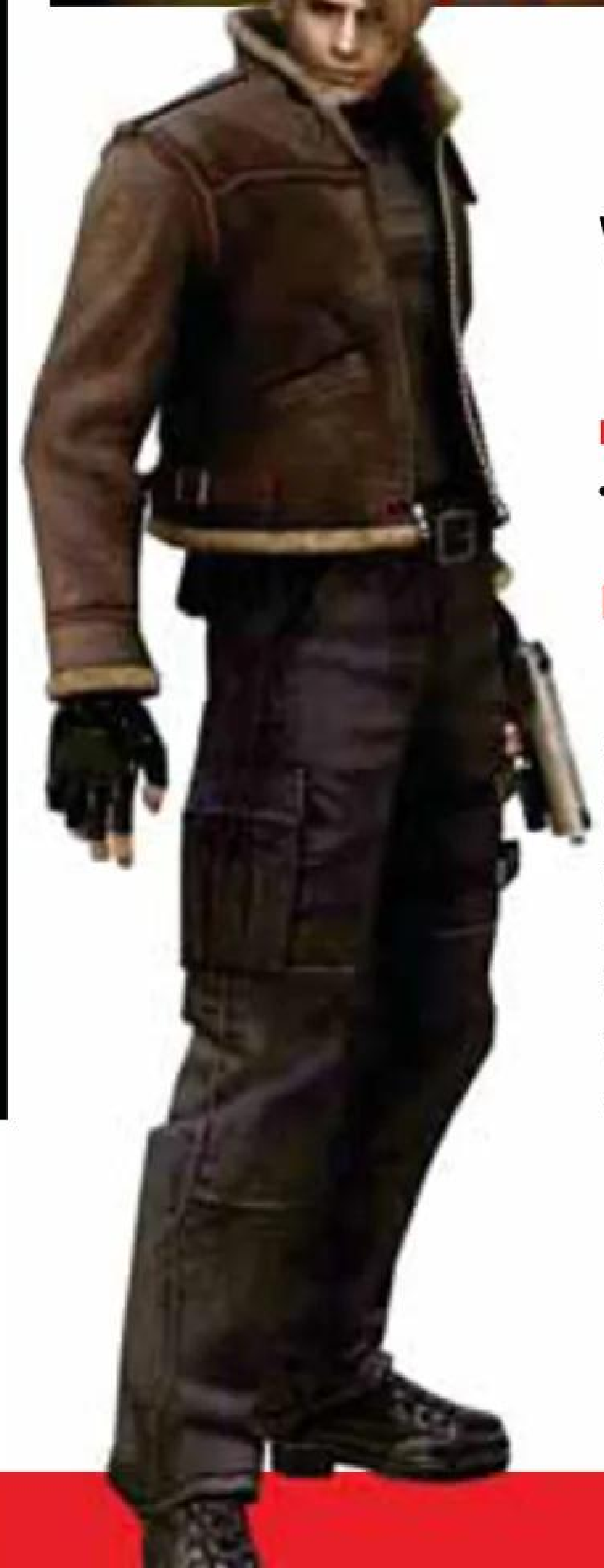
Fire Emblem Awakening

■ **Year:** 2012 ■ **Platform:** 3DS

16

Due to poor sales of the previous DS game (which never received a UK release), *Awakening* was going to be the last roll of the dice for the series. As a result Intelligent Systems made a number of changes, including the ability to disable the popular 'permadeath' feature, having characters pair up in the field, and having heroes defend each other or assist in attacks if they are placed next to each other. These new mechanics offer a whole new level of strategy and also help make the series more accessible than ever. The changes resulted in critical and commercial acclaim and the series is now stronger than it's ever been.

Chrom
Support
Str + 1
Mag + 1
Skill + 2
Spd + 2
Lck + 0
Def + 0
Res + 0
Mov + 0

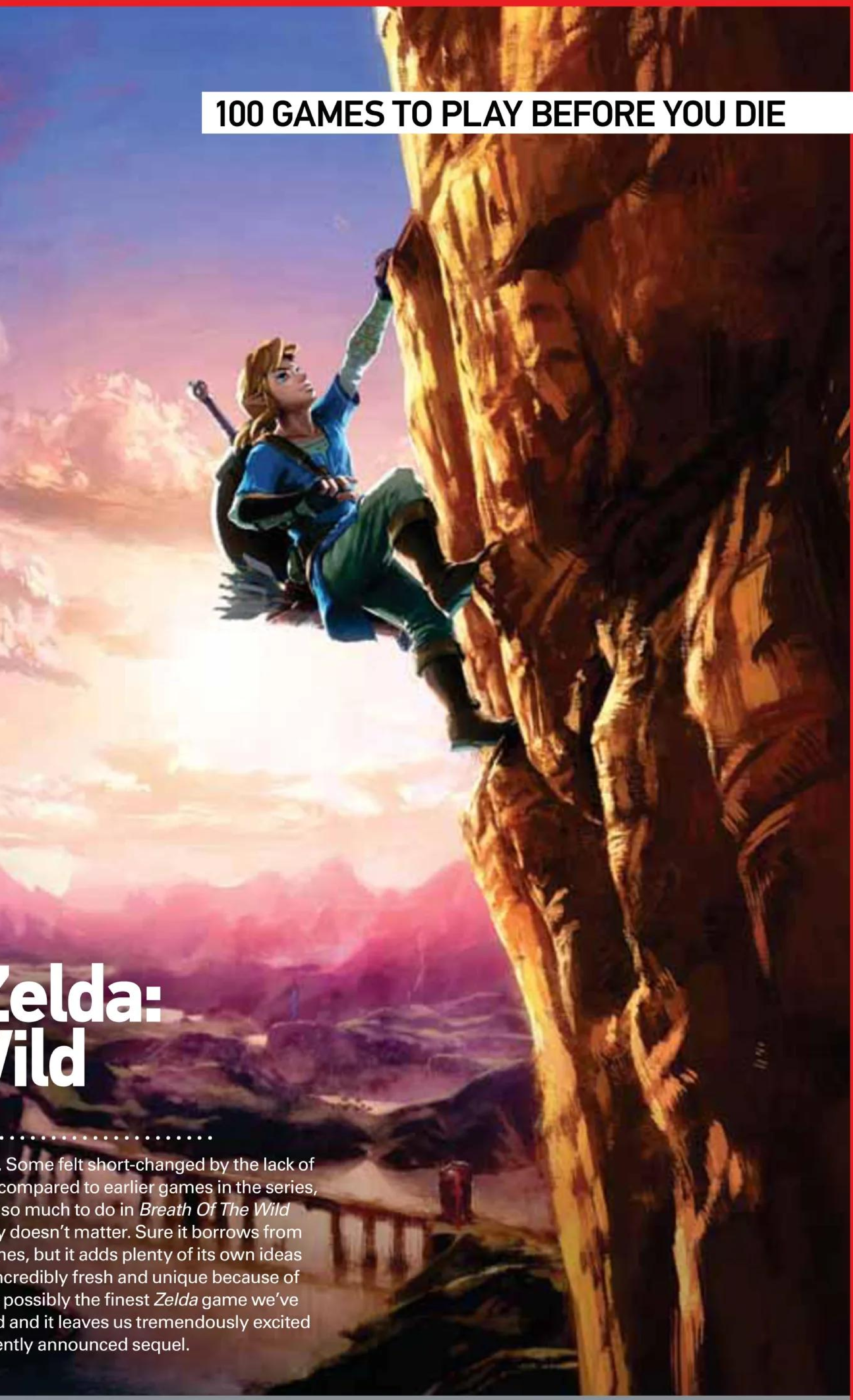


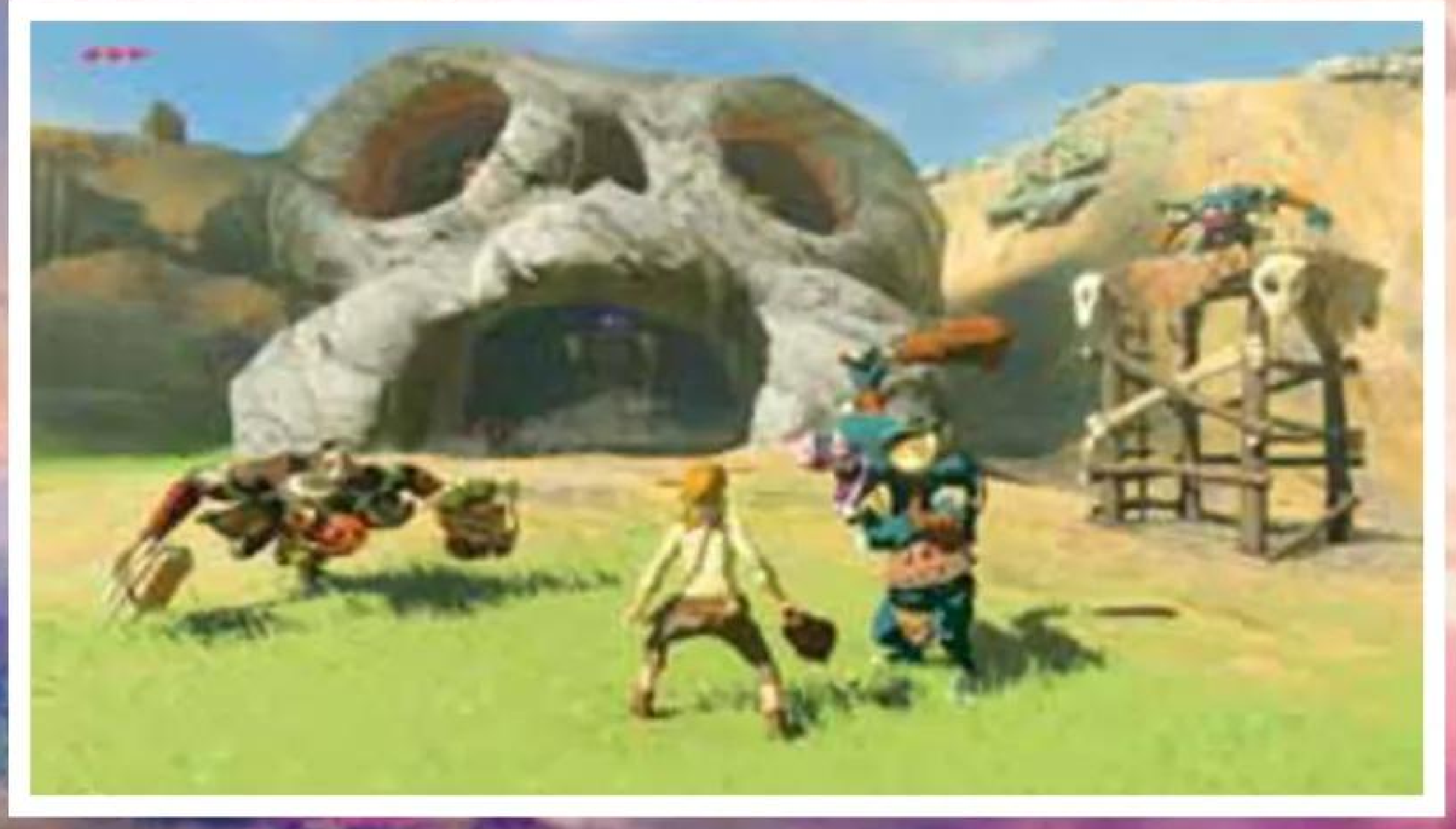
Resident Evil 4: Wii Edition

■ **Year:** 2007 ■ **Platform:** Wii

15

We've lost count of the number of times Capcom's game has been ported to other systems since it made its debut on the Wii. The reason for the large number of conversions is that it remains a tremendous romp through the *Resident Evil* universe, thanks to the return of Leon Kennedy, a brand-new over-the-shoulder viewpoint (that countless games shamelessly stole) a selection of immensely satisfying weapons and a delightfully silly plot. We prefer this Wii version over the GameCube original, as it has all the additional content from the PS2 and PC versions as well as excellent motion controls that genuinely enhance an already amazing game.





The Legend Of Zelda: Breath Of The Wild

Year: 2017 **Platform:** Switch

14 **While it was released on both the Wii U and Switch,** the latter system is the version to opt for as it offers far better performance. It's a fresh reinvention of Nintendo's long-running series thanks to its open-world setting, the ability to create meals and potions to enhance your abilities, weapon degradation, and a frightfully realistic-feeling world that allows you to manipulate fire and other elements to your own advantage. Some felt short-changed by the lack of dungeons compared to earlier games in the series, but there's so much to do in *Breath Of The Wild* that it really doesn't matter. Sure it borrows from similar games, but it adds plenty of its own ideas and feels incredibly fresh and unique because of it. It's quite possibly the finest *Zelda* game we've ever played and it leaves us tremendously excited for the recently announced sequel.

13 Mario & Luigi: Superstar Saga

Year: 2003 **Platform:** Game Boy Advance

While it borrows elements from *Paper Mario, Mario & Luigi* is very much its own game. It features some excellent, easy-to-understand combat mechanics, the story is genuinely enjoyable, and the brothers can combine to create unique new moves. Best of all it's extremely funny, with plenty of nods to the *Mario* series.

Solo Attack
A Button Confirm

12 R-Type DX

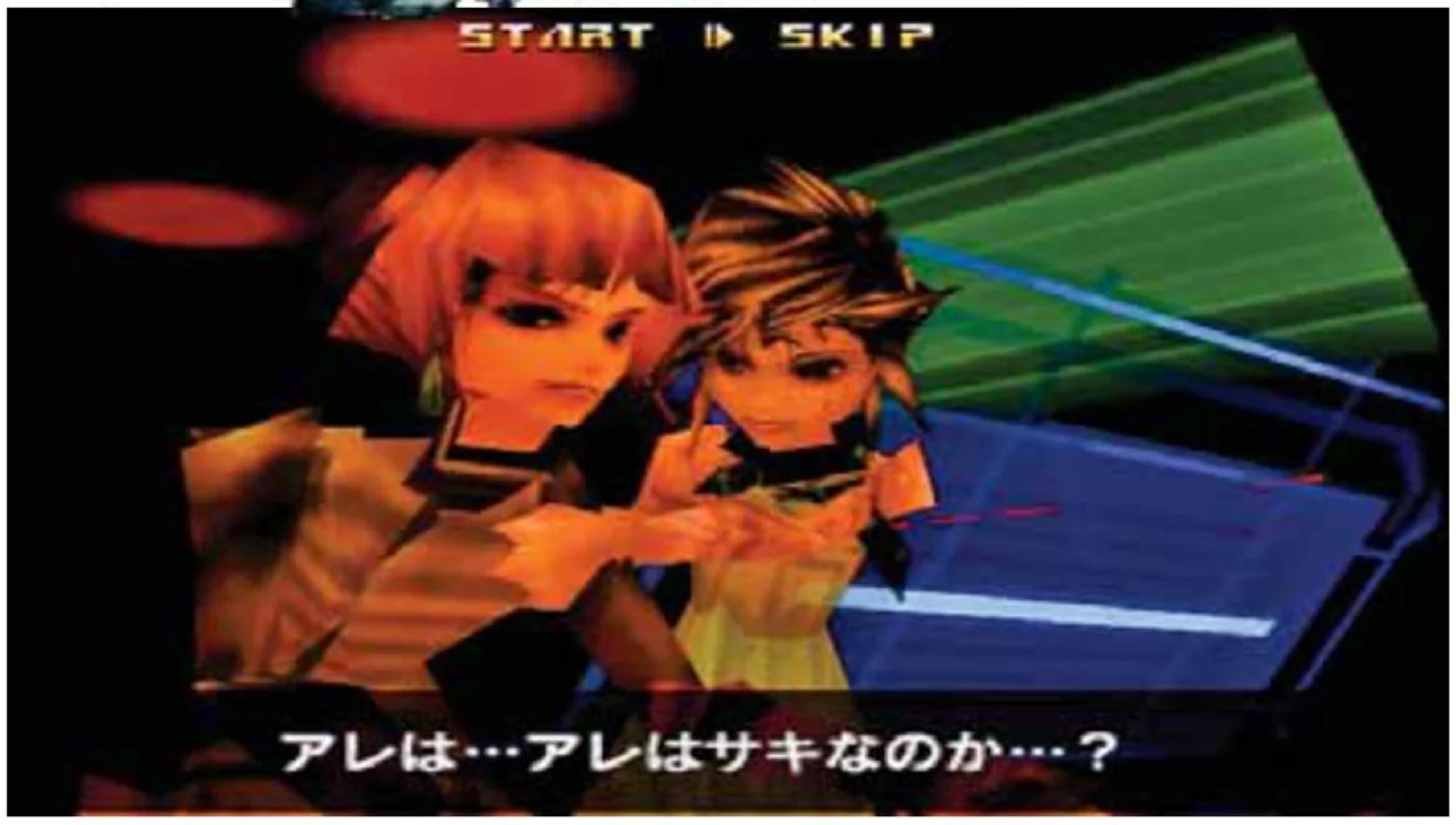
Year: 1999 **Platform:** Game Boy Color

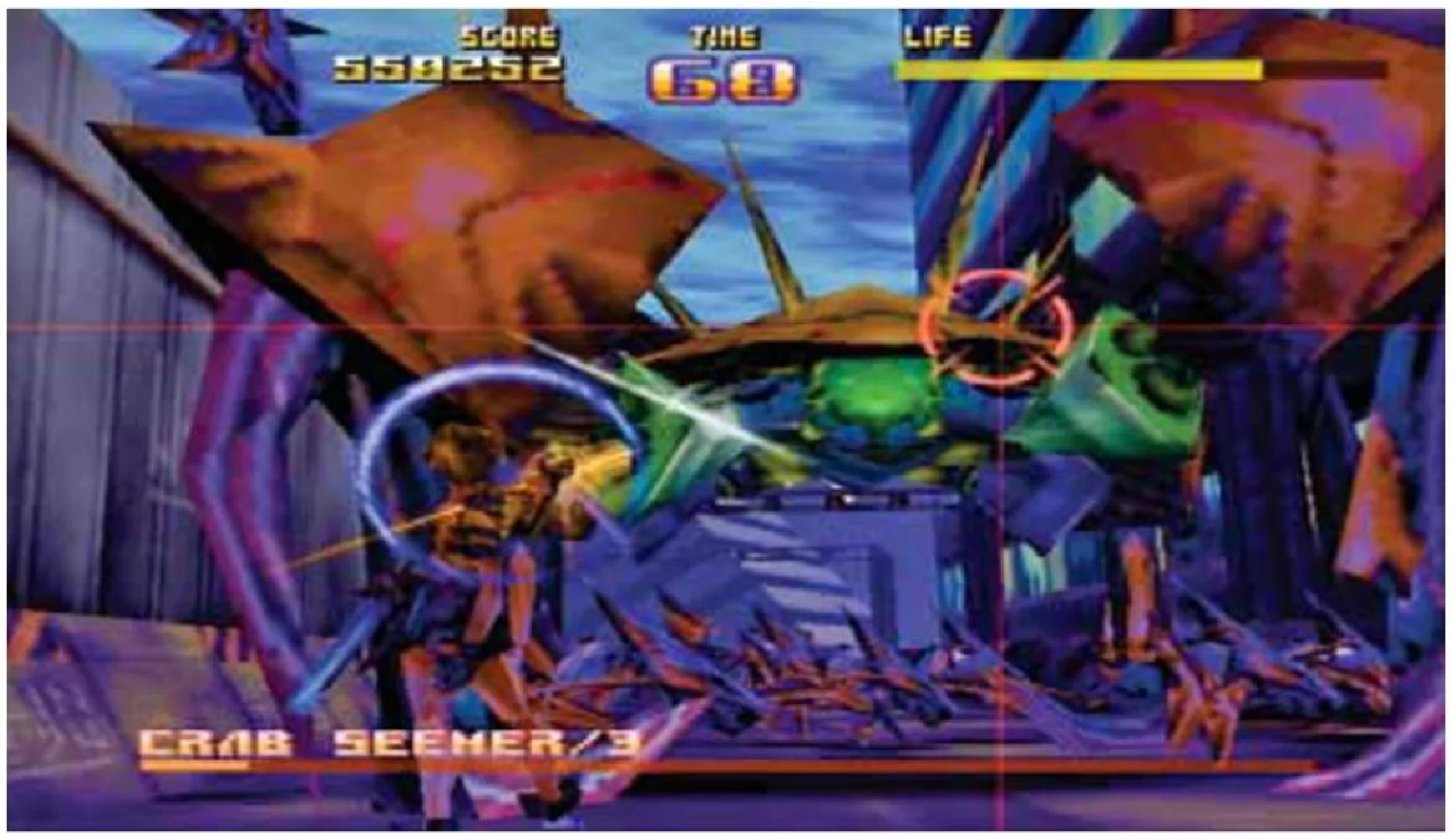
Okay, we're cheating a little here. In addition to featuring a truly astonishing port of Irem's arcade game, Bob Pape sneakily added the second arcade hit too, making this exceptional value for money. The DX is a nod to not only its deluxe status, but a brand new mode which mixes both games together into a suitably epic experience.

11 Beetle Adventure Racing!

Year: 1999 **Platform:** Nintendo 64

This neat arcade-style racer works partly because it's great fun to tear around in a Volkswagen Beetle, but also because there's so much to discover in it; each course is absolutely chock full of interesting shortcuts and alternate routes. An exclusive Australian release swaps the Beetles out for boring HSV Commodores.





Sin And Punishment

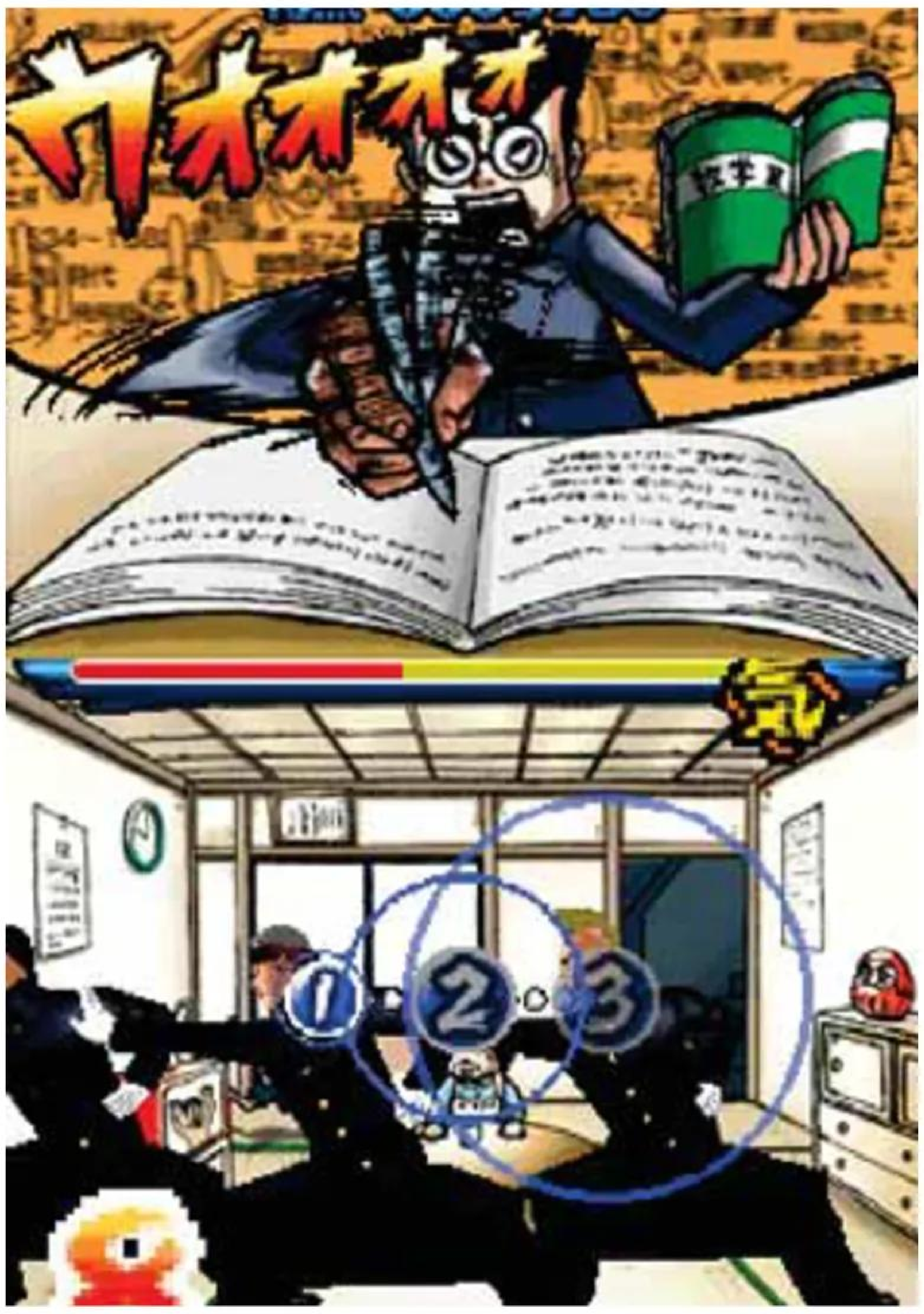
■ **Year:** 2000 ■ **Platform:** Nintendo 64

10 **While some will argue** that the Wii sequel is also worthy of inclusion, we're plumping for Treasure's original because it often pushes Nintendo's console to near breaking point. Watching *Sin & Punishment* in action really is something, it flings all sorts of crazy effects around the screen, piles on spectacular set-piece after spectacular set-piece, and is all held together by some truly satisfying combat mechanics. Like *Super Mario 64*, *Sin & Punishment*'s control system is built around the console's unique-looking pad and it does admittedly take a while to master. Once you do however you'll be able to pull off all sorts of insane moves and look like a gaming god in the process.

Osu! Tatakae! Ouendan

■ **Year:** 2005 ■ **Platform:** DS

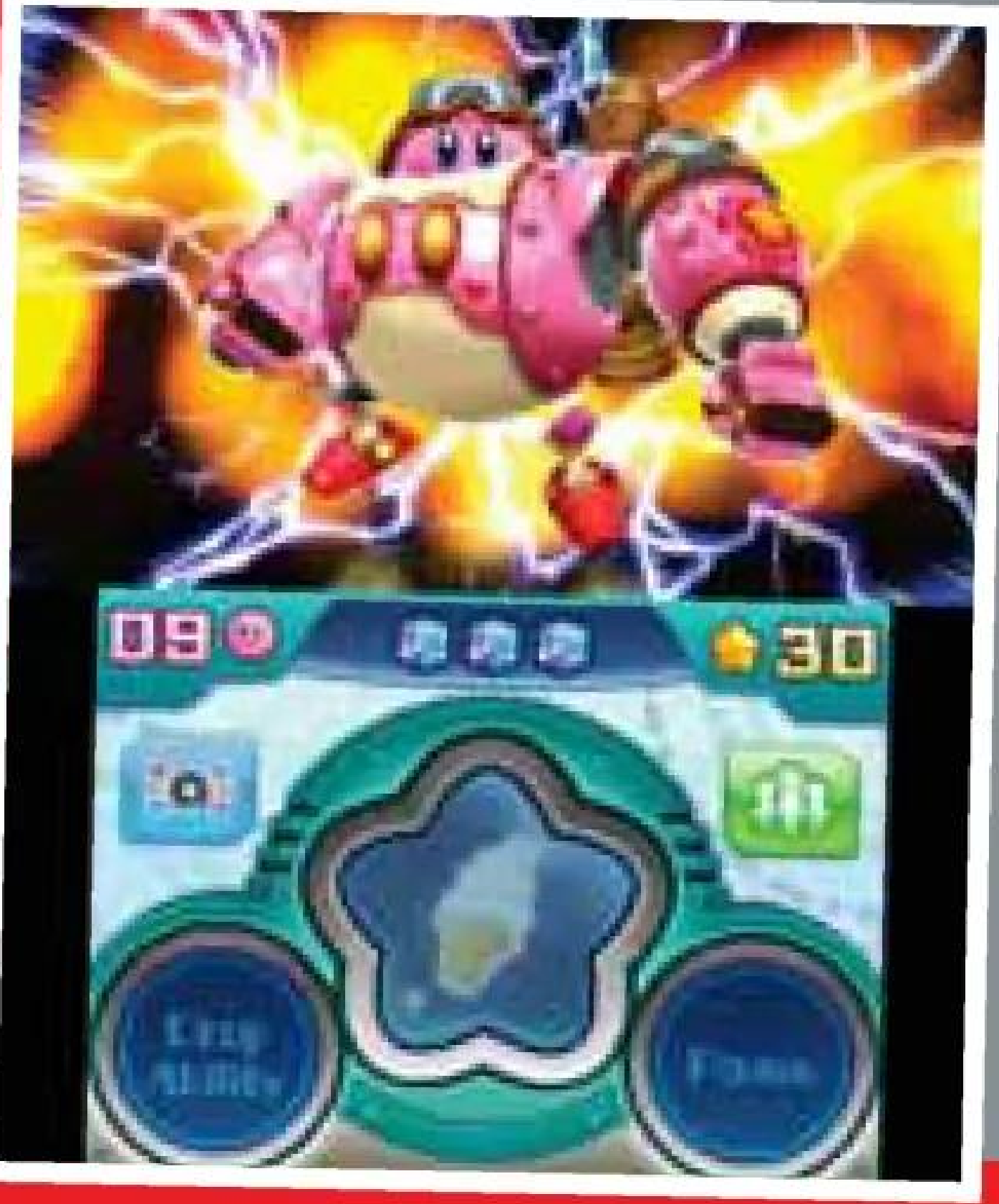
9 **When Nintendo first released the DS,** every developer used the touch screen for tacky gimmicks, or as a way to genuinely enhance their games. *Ouendan* is a perfect example of the latter school of thought, forcing you to combine intricate taps and strokes to deliver one of the best rhythm action games we've ever played. You effectively take on the role of a cheerleading squad and must pull off your dance moves in order to help a variety of different people. While everything is in Japanese comic-style panels on the top screen to let you easily follow the story. The tunes are superb too, mixing a variety of popular Japanese genres.



8 Kirby Planet Robobot

■ **Year:** 2016 ■ **Platform:** 3DS

This charming *Kirby* title is not only a great showcase for how good 3D can work on Nintendo's portable, but also shows how a little imagination can spark up a worn series. While Kirby can still inhale enemies and copy their abilities, he can also jump into various mech suits which greatly enhance how he tackles each inventively created stage.



7 Donkey Kong Country

■ **Year:** 1994 ■ **Platform:** SNES

Rare's game looked so astonishing at the time, many thought it was running on Nintendo's next planned console. It still looks great today, and it remains the best game in the original SNES trilogy thanks to well-constructed levels, useful animal companions and one of the best soundtracks the series has ever produced.

6 Duck Hunt

■ **Year:** 1984 ■ **Platform:** NES

This entertaining light gun game was packaged alongside the NES and makes our list due to the endless charm that it offers. While each level only requires you to shoot down ten ducks (or clay pigeons depending on the mode you select), it gets mighty challenging on the later stages, requiring critical sharp shooting. It's funny too, thanks to the on-screen antics of your faithful hound.

5 The Legend Of Zelda: Link's Awakening

■ **Year:** 1993 ■ **Platform:** Game Boy

Many consider this to be the best 2D *Zelda* and it's not hard to see why. The dungeon design throughout is truly exceptional, while the inventive boss fights are taxing, but never overwhelming. The surprisingly dark storyline is one of the best the series has offered, while the limited hardware of the Game Boy never taxes the design team's lofty ambitions.

4 Fire Emblem: Path Of Radiance

■ **Year:** 2005 ■ **Platform:** GameCube

A limited release means the first western *Fire Emblem* released for a home console now fetches high prices online. It's worth taking the hit, as it has one of the best stories in the series, plenty of lovable characters and satisfying combat mechanics. Additionally, if you transfer your save to the Wii sequel, *Radiant Dawn*, your characters in that game will receive handy stat boosts.

3 Super Mario 3D World

■ **Year:** 2013 ■ **Platform:** Wii U

It's rather astonishing that this excellent platformer hasn't been re-released for the Switch. As you'd expect from a 3D *Mario* game, *Super Mario 3D World* is filled with clever flourishes, neat gameplay mechanics that never outstay their welcome and plenty of new suits and items to try out. It also supports up to four players for some fun multiplayer shenanigans.

Wild Guns

■ **Year:** 1994 ■ **Platform:** SNES

2 Amazingly, no one really saw the brilliance of Natsume's game on release, meaning it now sells for utterly stupid prices on eBay. Set in a weird world that combines the Wild West with Steampunk, *Wild Guns* is notable for its gigantic bosses, satisfying shooting mechanics (virtually everything onscreen can be shot to pieces) and neat scoring system. It's initially hard to acclimatise to due to its interesting setup (you have control of both your character and gunsight), but once it clicks you'll find yourself effortlessly mowing down the hordes of enemies that get thrown at you. An enhanced version was recently re-released on Switch, meaning there's no excuse not to play it.

GoldenEye 007

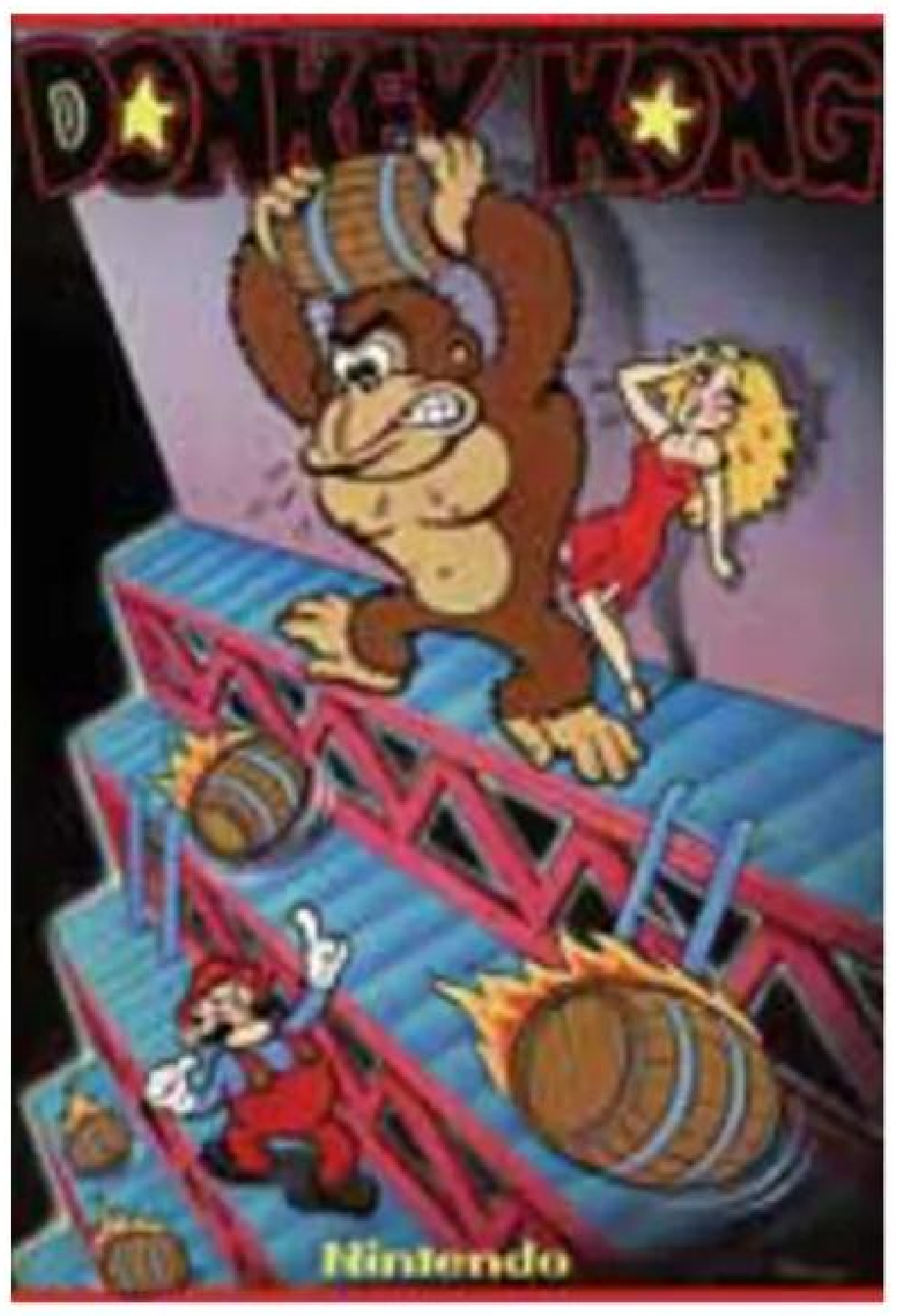
■ **Year:** 1997 ■ **Platform:** Nintendo 64

1 It's showing its age a little now (particularly in multiplayer) but there's no denying what a landmark title *GoldenEye* is. Its multiplayer (which was practically made over a weekend) helped define the template for modern console shooters, while the multi-tiered structure of its single-player levels is still a thing of beauty, scaling up with more objectives to complete as you ramp up the difficulty setting. It's not only a great example of how to plunder your source material to make an excellent game, but also of how important Rare was to Nintendo during the N64 years. And to think the game was actually originally planned for release on the Super Nintendo!

DONKEY KONG
Nintendo
DONKEY KONG
Nintendo
1UP
003700
HIGH SCORE
007650
HELP!
L=00
BONUS
4400

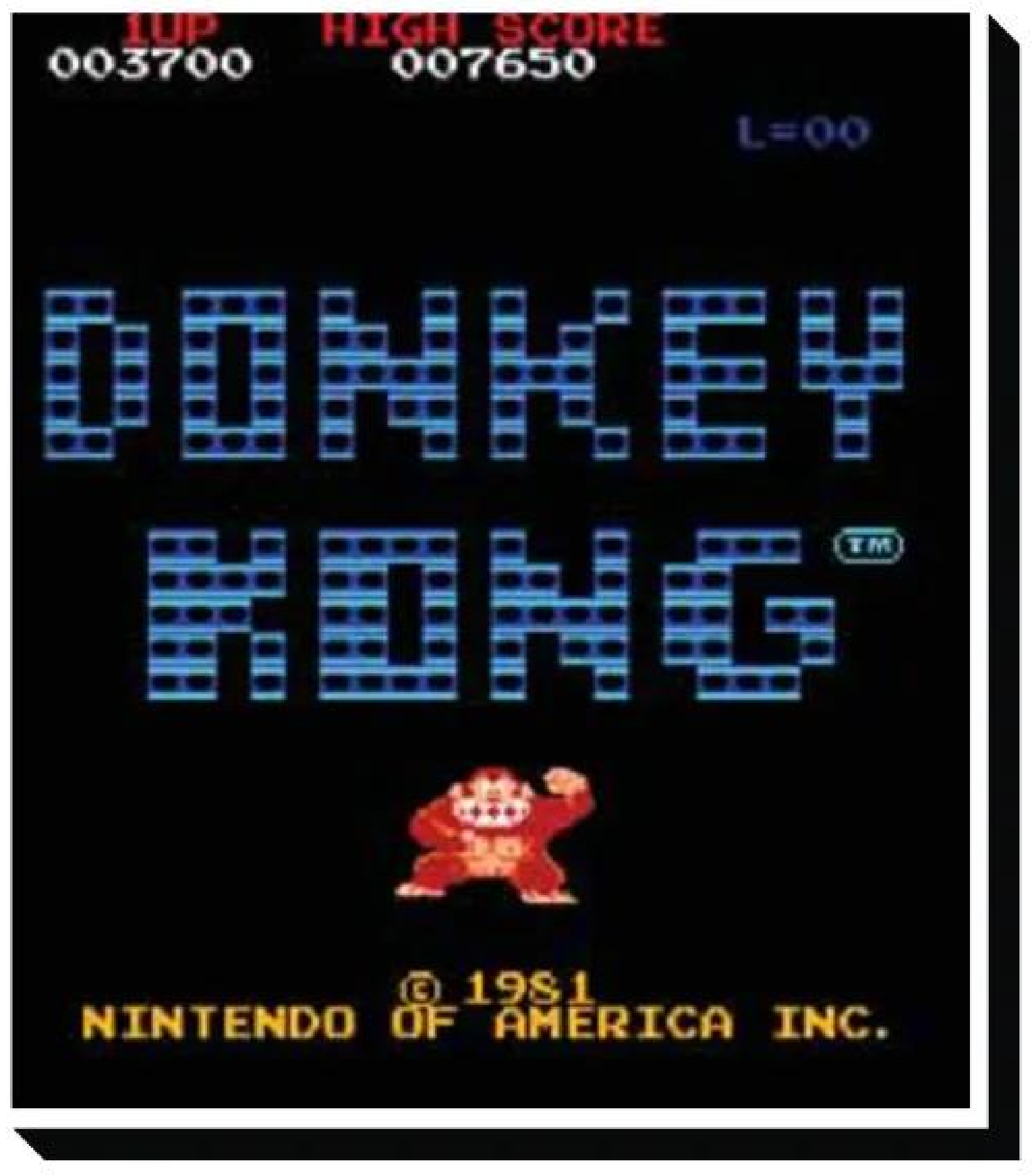
IN THE KNOW

- **» PUBLISHER:** NINTENDO
- **» DEVELOPER:** NINTENDO
- **» RELEASED:** 1981
- **» Platform:** ARCADE, VARIOUS
- **» GENRE:** PLATFORMER


DONKEY KONG
Nintendo

Donkey Kong

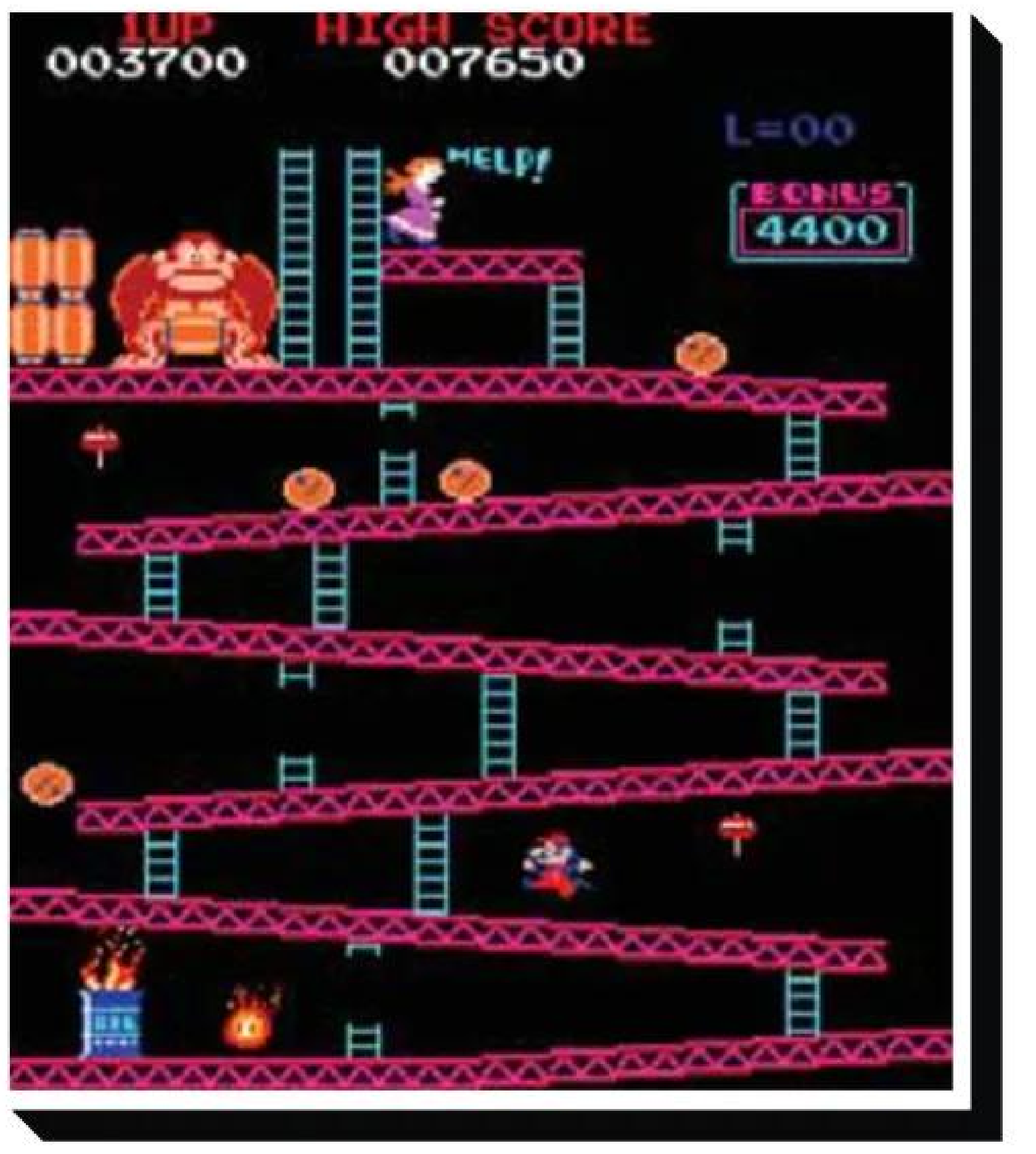
Martyn Carroll takes a definitive look back at Nintendo's timeless classic and unravels its brilliance by speaking to the very people who know the coin-op intimately



When it comes to iconic videogames, *Donkey Kong* is the daddy. Created by gaming legend Shigeru Miyamoto and released to huge success in 1981, it's one of the most celebrated and treasured games in history. It goes without saying that it has single-handedly defined the platform genre and introduced us to not one but two of the most popular videogame characters ever – the titular gorilla and his tormentor Mario. Such is its impact that some enduring videogame myths have built up around its creation. Was the game supposed to be called 'Monkey Kong' but the name got misinterpreted somewhere along the way? Probably not. Was the game originally designed as a vehicle for Popeye and Brutus? Apparently so. Was the game responsible for saving an ailing Nintendo of America from certain bankruptcy, and providing the Japanese parent with the funding and impetus to develop the Famicom and therefore change the course of gaming forever? Quite possibly.

The facts are that in July 1981 Nintendo produced *Donkey Kong* as an upgrade kit for *Radar Scope*, its *Galaxian*-inspired game released the previous year that, despite initial success, had largely flopped in the US. The majority of US-based *Radar Scope* machines were converted, clearly indicating that the space shooter hadn't been pulling in as many quarters as hoped. The new game certainly did the trick, as Nintendo quickly went from manufacturing conversion kits to building dedicated cabs to meet the massive demand. This led to two cosmetic 'flavours' of *Donkey Kong*: the new, widely produced blue-coloured cabs with added side art, and the rarer converted *Radar Scope* cabs that retained their original red paintwork.

A year on from its initial release, *Donkey Kong* had reportedly earned Nintendo $180 million. This success led to a clamour of console and computer manufacturers looking to license the coin-op. Once more, the whole episode is now swamped in folklore, with deals done that supposedly led to lots of hand-wringing and toy-throwing.



It's even commonly suggested that *Donkey Kong* played a part in scuppering negotiations that would see Atari release the Famicom in the US. All that aside, the deals resulted in Coleco receiving the home console rights and Atari settling for the home computer rights.

Coleco immediately played an ace by bundling the game with its ColecoVision console, causing hardware sales to skyrocket. It also put the game out on the Intellivision and Atari 2600 consoles. Such was the popularity of the game that even the scaled-down 2600 version shifted more than 4 million units, generating a massive $100 million in sales. Atari itself released the game on its 400/800 computers and ported it to several others, including the VIC-20, C64, TI-99/4A and Apple II. Inevitably, unlicensed clones with cheeky titles like *Donkey King* and *Killer Gorilla* flooded many computer platforms in the early Eighties. Nintendo, meanwhile, capitalised on the success of the original with a couple of arcade sequels and a range of Game & Watch handheld titles. Mario would, of course, go on to dominate Nintendo's character roster for the next decade, but our anthropoidal friend swung back into contention in the mid-Nineties with the release of a new *Donkey Kong* title on the Game Boy, and the first of Rare's *Donkey Kong Country* games for the SNES.

The original game may be approaching its 30th anniversary, but it is most certainly far from being forgotten. In recent years it has even been thrust back into the public consciousness thanks to the high-profile battles over the *Donkey Kong* high score world record. Die-hard players Billy Mitchell and Steve Wiebe have also been involved in a long-running battle to claim the world record, with their efforts to one-up each other's achievements memorably chronicled in the 2007 documentary *The King Of Kong*. Earlier this year, a brand new competitor named Hank Chien appeared and entered the fray, so now it's a three-way fight for the most coveted title in competitive videogaming. In October 2015, Robbie Lakeman claimed the coveted title with a colossal score of 1,177,200 – but it will have probably changed hands again by the time you read this! *

the expert

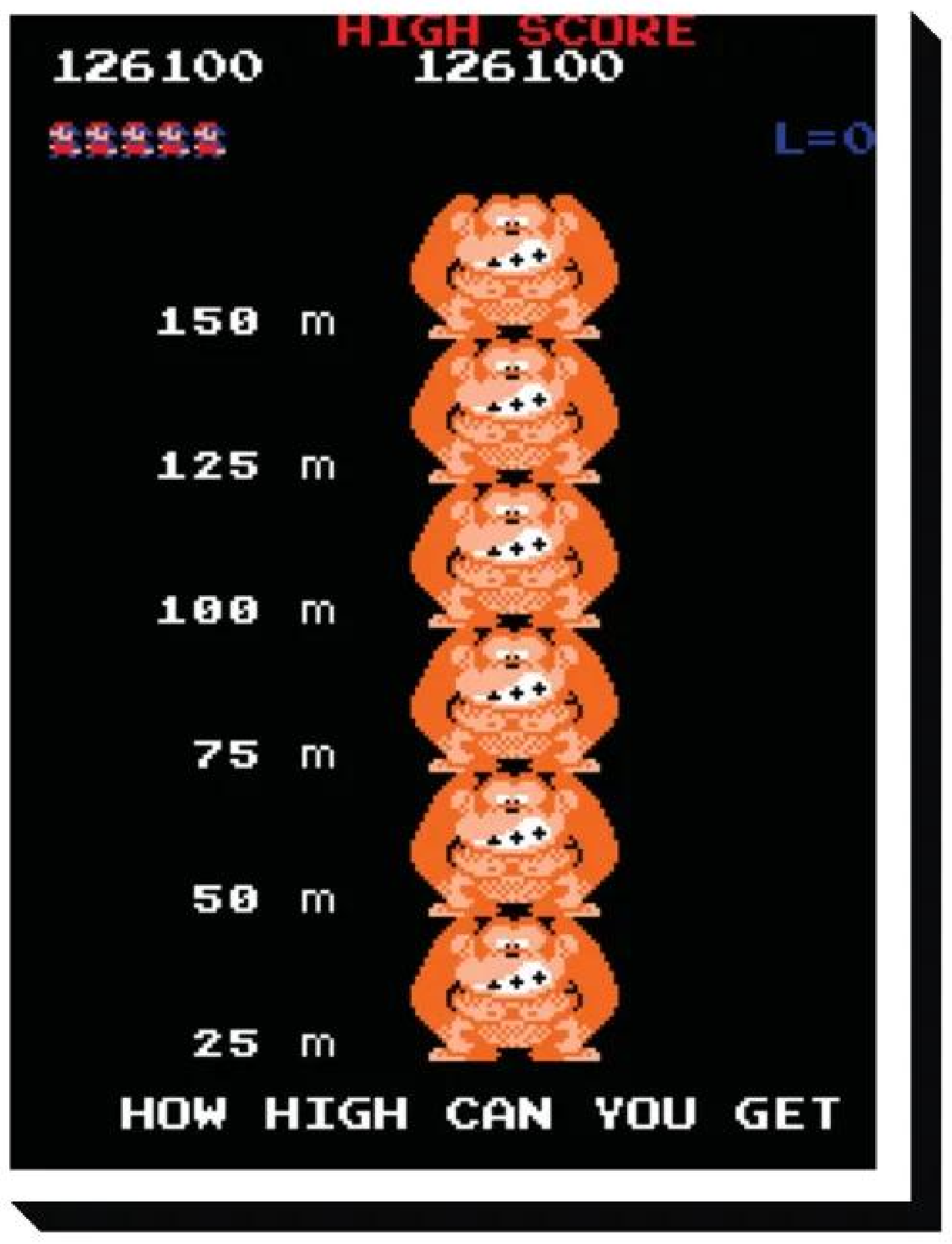
PROFILE

» NAME: HANK CHIEN
» AGE: 36
» DATE OF BIRTH: 4 AUGUST 1974
» HOMETOWN: NEW YORK, USA
» OCCUPATION: PLASTIC SURGEON

The battle to be 'King of Kong' was famously fought between Billy Mitchell and Steve Wiebe. That all changed in February 2010 when newcomer Hank Chien set a (now broken) new record

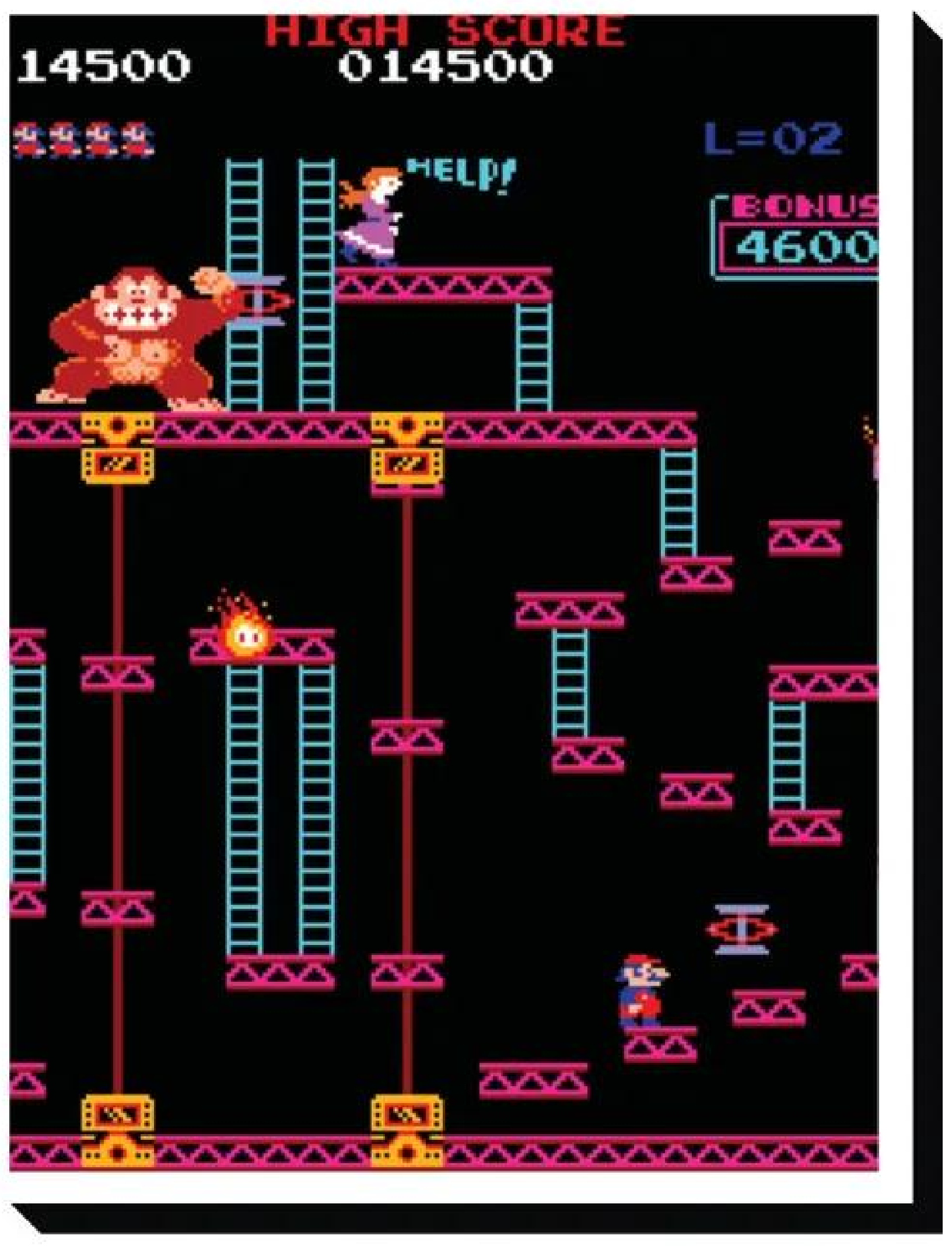
■ Is it true that you only started playing *Donkey Kong* after seeing the *King Of Kong* documentary?
I think I may have played one game of *Donkey Kong* prior to watching *The King Of Kong*, but yes, it's pretty much true I had never played the game. After watching the documentary, I decided to play just for fun. I had no idea where I could find a *Donkey Kong* machine, but I was aware of MAME. I improved very rapidly on MAME and after three months I reached the kill screen. At that point, I decided to find a public machine and thanks to the internet I found one pretty quickly at Barcade in Brooklyn. I then searched eBay and Craigslist for my own machine and after a few months I was able to find one in reasonable shape for a reasonable price.

■ At what point did you realise that you had a chance at the crown?
My initial intention was not to break the world record. I really was just playing for fun. In fact, I was going to try to break a million and then sell my machine. I wasn't even sure I could even break a million until I actually did it. It was 13 September 2009 and I had a business trip that day and had a flight to catch in two hours. My high score at the time was around 940,000. I started to play a game in those two hours and I scored 1,037,700 and barely caught my flight. My first million point game was only 12,500 points shy of the world record. At that point I realised I had a shot and I started playing seriously and recording my attempts.



» Upon passing the fifth level, the game loops until level 22, where a bug prevents further play.

■ Can you describe the events that led to you scoring 1,061,700 points on 26 February 2010?
After my first million point game, I actually did not play much because I was discouraged by the Twin Galaxies rules for scores over a million. Basically at that time it had to be done live in front of a referee. The rule was changed in November 2009, but with the holidays and work, *Donkey Kong* took a back seat. However, in early February I put my mind to it. In the coming weeks, I had several very close games, so I knew I could do it. Then came 26 February, a Friday. Ordinarily I would have been at work, but a huge snowstorm covered the city and my car was buried in snow so I was stuck at home with nothing to do but play *Donkey Kong*. In the evening I had a really good start and didn't die until late in the game. The rest is history.



» Is it better to take the low or high route? Expert players always opt for the latter.

■ Your achievement generated lots of press once Twin Galaxies verified it. It must have been a pretty crazy few weeks for you…
After I broke the world record it was really crazy. People were calling my office, my home, my parents' home, email, Facebook, you name it. I was flooded, and that's on top of my ordinary busy life. It was fun to get all that attention, but only for about a day!

■ Did Billy Mitchell or Steve Wiebe offer their congratulations?
Billy Mitchell acknowledged my achievement, but I have not spoken to him directly. I would like to meet him at some point. Steve Wiebe called and emailed to congratulate me personally.

■ Billy reclaimed the high score [when this article was originally

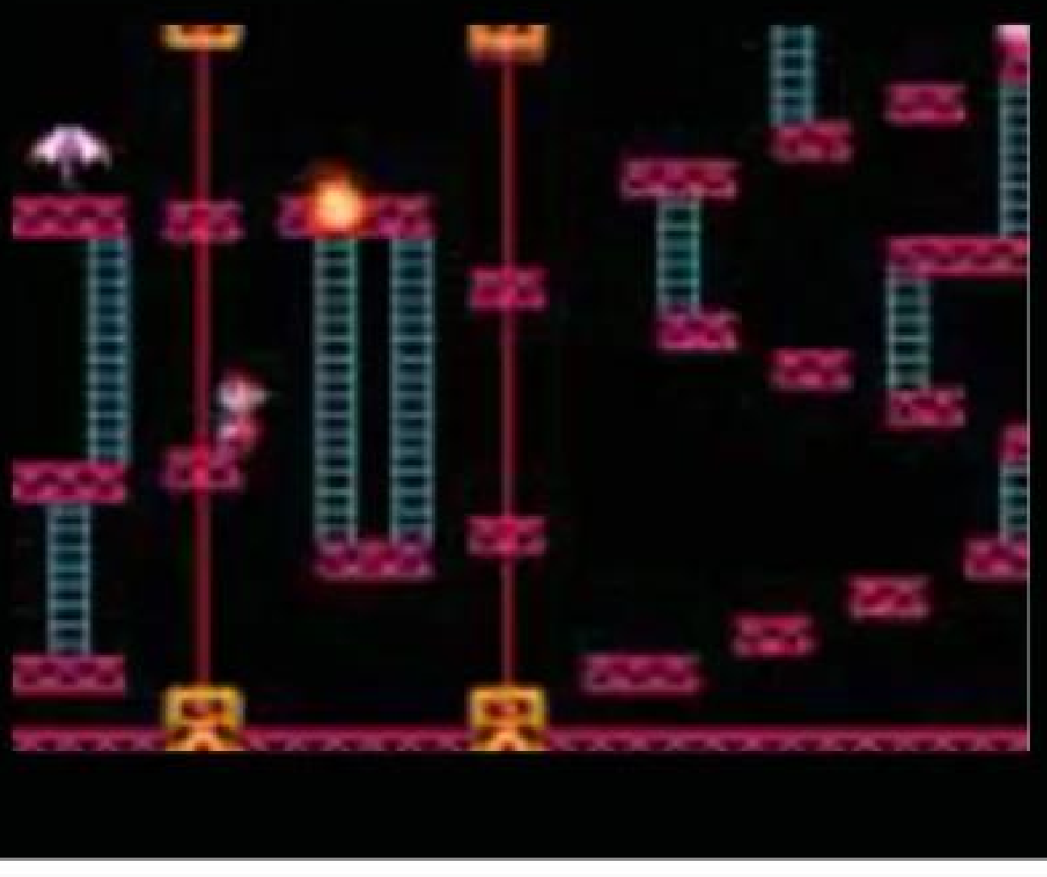
Platforming Perils

Things to look out for when attempting to topple the silly gorilla

Bloomin' Barrels
Jump them, smash them or simply avoid them. Just don't get flattened by them.

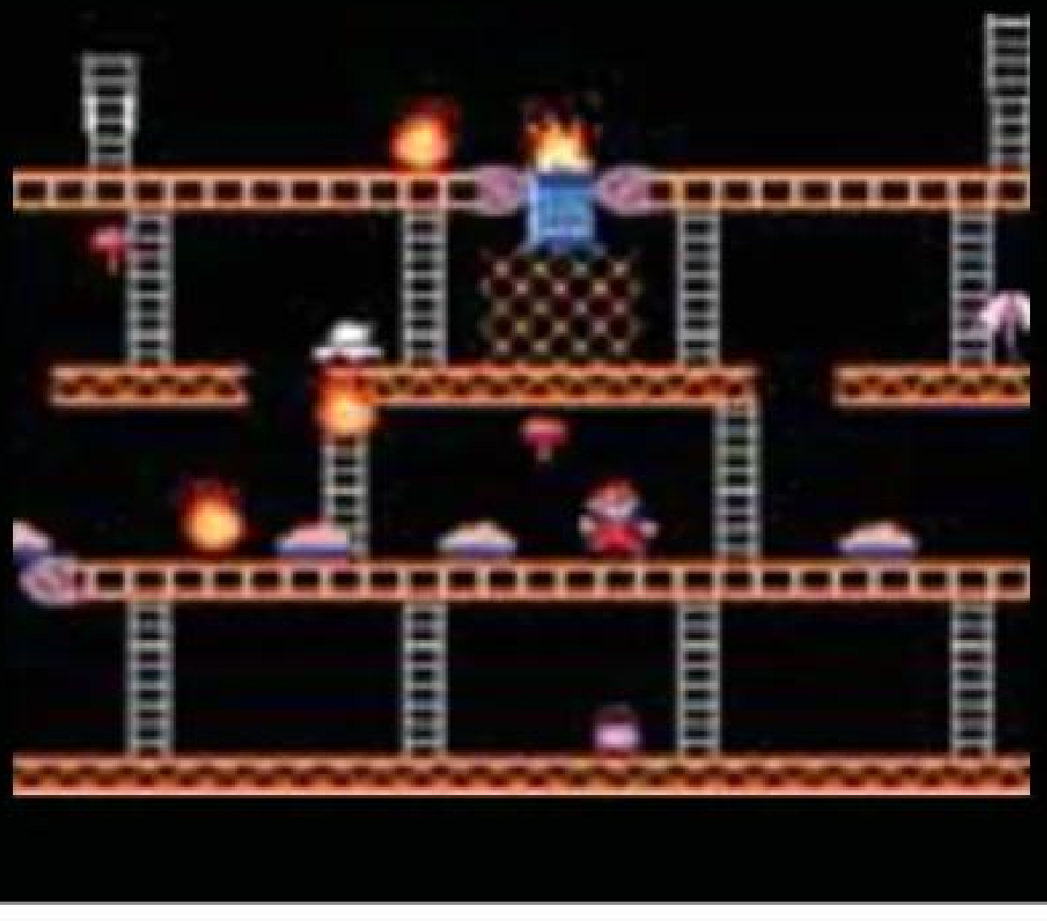
Flamin' Flames
The flames are a pain and they feature on most screens. Avoid them wherever possible.

Loopy Lifts
Be careful jumping to and from the lifts, and be sure not to get yourself caught up in the gears at the bottom.



Jumping Jacks
You need to position yourself carefully to dodge these fast-moving hazards. Tricky in later levels.

Pesky Pies
Don't end up with pie on your face. Time your jumps and beware of the conveyor changing direction.



» Hank pictured here practising on his very own *Donkey Kong* cab in his Manhattan apartment.

published], then Steve grabbed it back. It looks like neither of these guys plan to give it up. Are you planning to try to take it back?
Steve is a great player and he has been working hard to reclaim the world record, so he deserves the top spot. Congratulations to him! I do plan on taking it back, but my main goal is to maximise the game to the best of my ability, whether it is a world record or not. In my original world record game, I held back a lot and made some careless mistakes, so I know I can do a lot better. To score high you have to take a lot of risks and be really aggressive.

■ What kind of high score do you think is possible, with a perfect run?
The current world record is nowhere near the maximum. The thing about *Donkey Kong* is that there are so many variables and so many ways to play the game, it's hard to say exactly what the maximum score is. I think that the achievable maximum score is close to 1.2 million, but it would require a lot of skill and luck to pull it off. The theoretical maximum is a lot higher – maybe 1.5 million. A great thing about the game is that the world record will always be beatable. This saga isn't over yet.

■ There's been talk of *The King Of Kong* becoming a dramatised movie. If this happened and you were featured in the film, who would you like to play you?
I don't think there are any Hollywood actors good looking enough to play me, but if I had to choose, maybe Brad Pitt or Johnny Depp could do it! *

HANK'S SURVIVAL GUIDE

Expert strategies from the newest challenger to the Donkey Kong world record

1 **■ TOP TIP**
For beginners, just clear the boards as fast as you can. On the barrel board always keep an eye on the barrels above you and prepare for the worst case scenario. There really aren't many secrets; it's just a matter of practice.

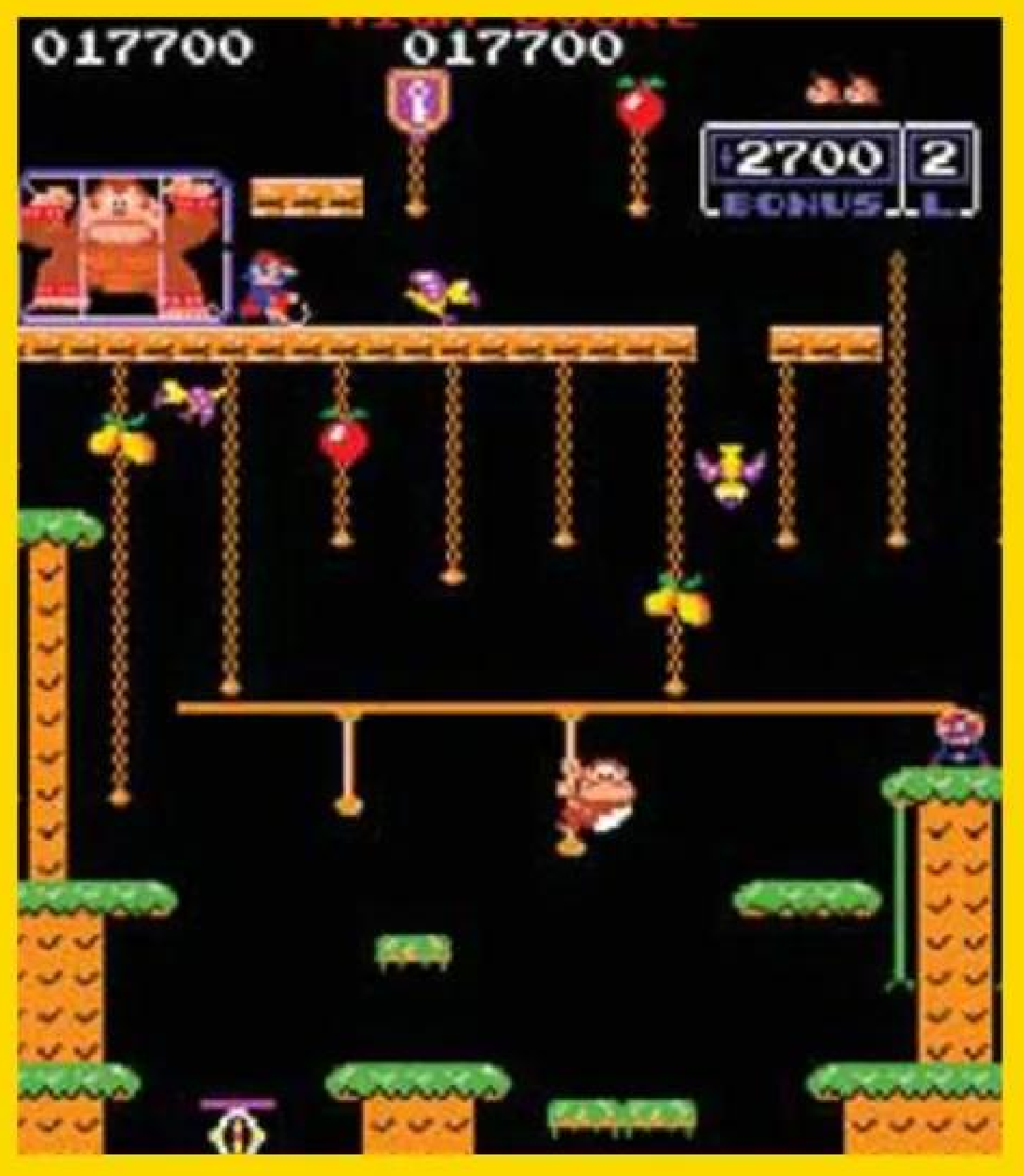
2 **■ BONUS PLAY**
When playing for a high score, it's a combination of knowing when to hang around and when to finish the stage to claim the bonus. It is not always beneficial to stay around on a board as the bonus timer ticks down very fast, particularly in the later levels. You have to know when you can 'beat the clock' and when you just have to call it quits.

3 **■ HAMMER TIME**
Whether to grab the hammer or not is a complicated question. On the barrel board the top hammer is safe, but the bottom hammer is dangerous. I grab it when I'm playing for points but when I'm playing for survival I'll usually skip it. On the conveyers and rivets, that's even more complicated. I could probably write a short book on it.

4 **■ RIVET ROUTE**
There are two patterns on the rivets that are commonly used, yet there is no consensus even among the top players as to which is better for survival or for points. In one pattern you clear all the rivets on the left and then try to grab the top hammer. In the other, you clear all of the rivets except the one on the level with the bottom hammer, then grab the bottom hammer and run across. Even those two patterns are not foolproof and you have to know what to do when it falls apart.

the sequels

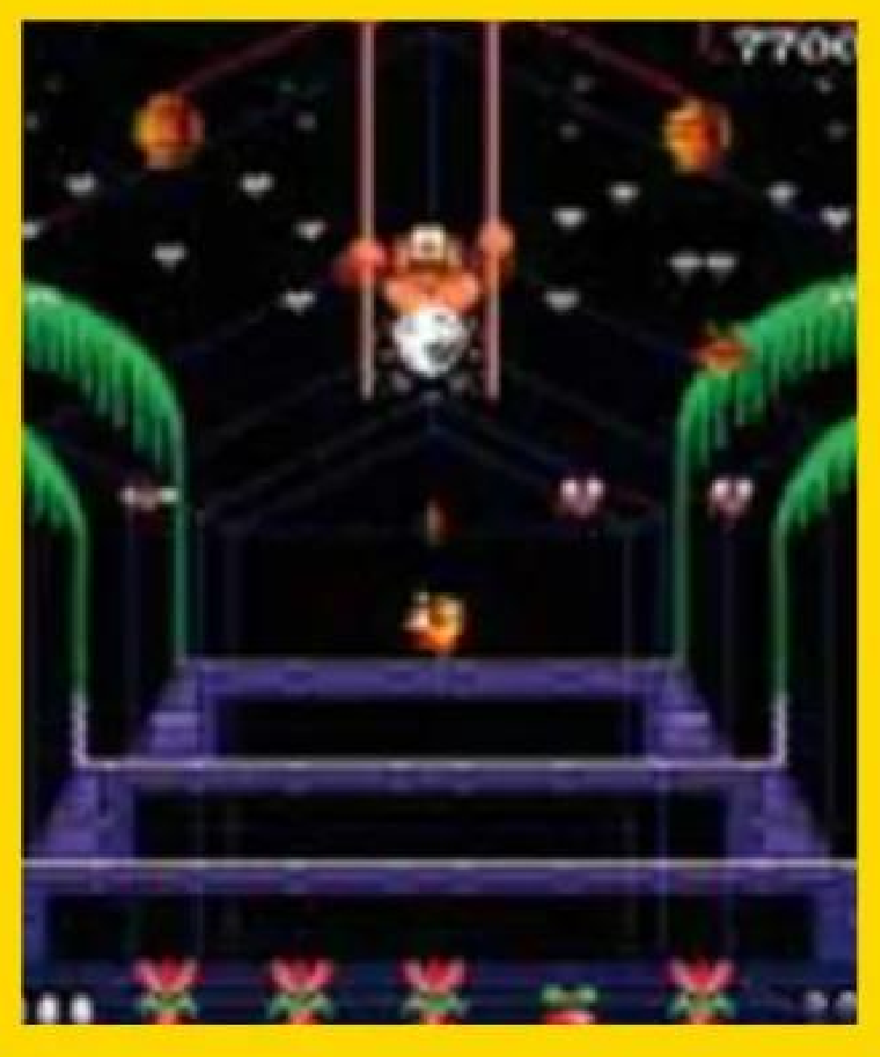
There are dozens of Donkey Kong spin-offs, but only three true sequels



Donkey Kong Jr

Released: 1982

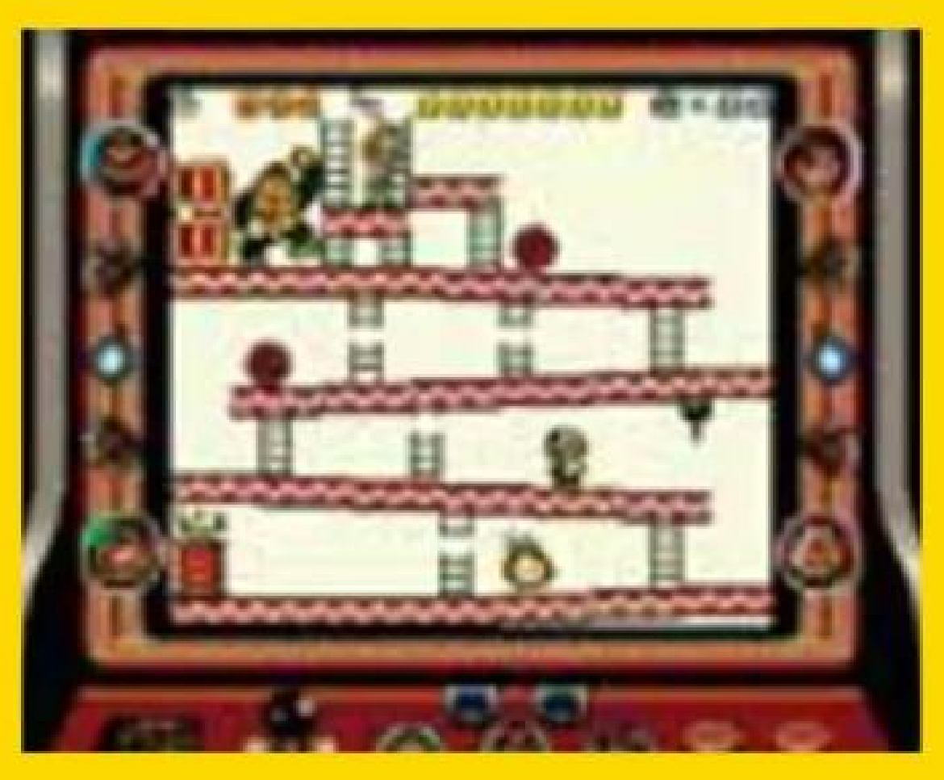
The success of *Donkey Kong* meant that the sequel arrived faster than a tossed barrel on a greased girder. But what's this? There's not a single barrel to be seen. Donkey Kong has been caged by Mario and the moustachioed one has unleashed all manner of jungle critters in an attempt to stop DK's plucky son from rescuing his dad. *Donkey Kong Jr* is a platform game, but a lot of time is spent traversing vines and chains, which can be cumbersome. It doesn't help, either, that Junior is rubbish at jumping, and the result is a slightly awkward sequel that, while utterly charming, lacks the smoothness and grace of the original.



Donkey Kong 3

Released: 1983

DK Jr played a little on the sluggish side, but you certainly couldn't level that at this fast-paced shooter that's far removed from the platforming roots of the series. The title character is once again the cranky nemesis, but Mario by now had better things to do, leaving goofy urchin Stanley to step in and deal with DK. The frantic action takes place over three stages set in a greenhouse, and in each one Stanley must continually blast the pesky primate with his insect spray gun, forcing him up into the rafters where stinging bees ultimately await him. It works brilliantly as an arcade game, in that you offer up a credit and get your five minutes of fun, but the game lacks variety and doesn't warrant repeated plays, thereby denying it the lasting appeal of its forebears.



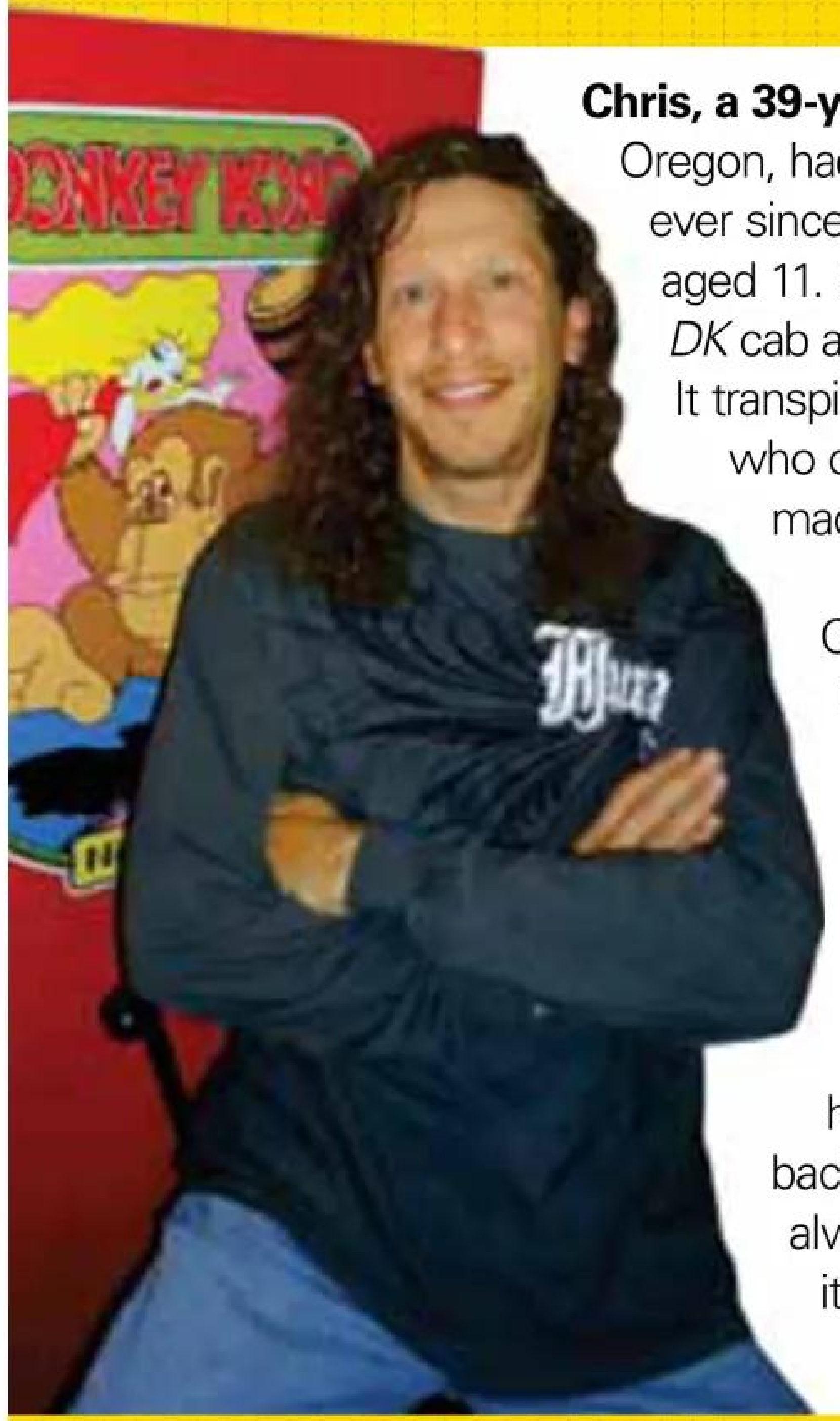
Donkey Kong (GB)

Released: 1994

When it comes to resurrecting and reinventing a franchise, nobody does it better than Nintendo. This game, launched alongside the Super Game Boy in 1994, is a perfect example. It begins as a nifty homage to the original coin-op, with the arcade's four screens authentically reproduced with a few little extras thrown in, but instead of the game looping back to the beginning once DK hits the deck, it instead presents the player with a squillion extra screens to negotiate. In the majority of these, Mario must find an oversized key and carefully carry it to the locked door, which leads to the next level. Part-puzzler, part-platformer, this is an excellent update that deservedly spawned its own spin-off series in the *Mario vs Donkey Kong* games on the GBA and DS.

the machine

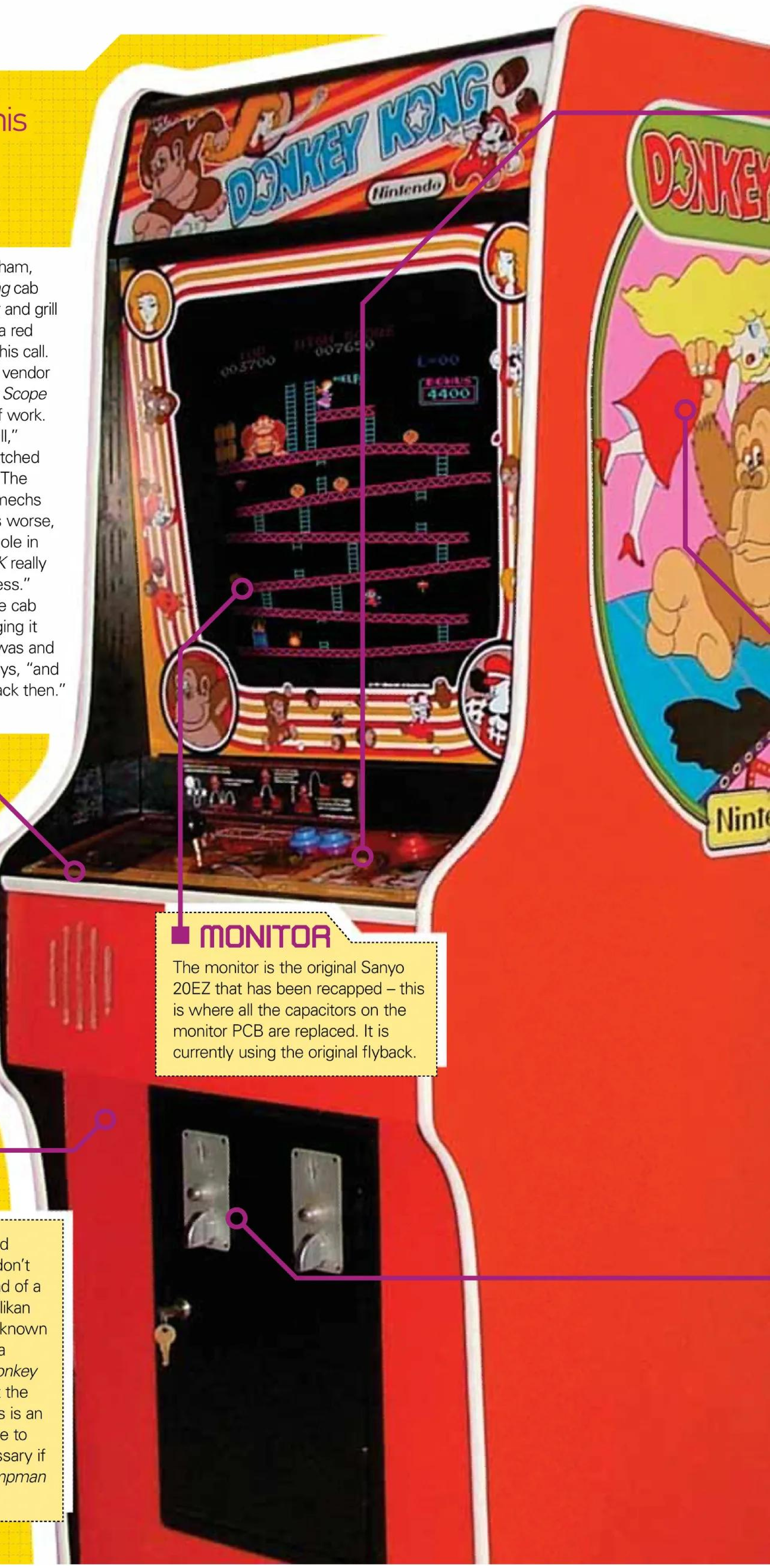
Donkey Kong fan Chris Ellison shows off his rare red-coloured machine, which he has painstakingly restored to mint condition



Chris, a 39-year-old IT support worker from Gresham, Oregon, had hankered after his own *Donkey Kong* cab ever since first playing the game in his local bar and grill aged 11. He ran an ad on Craigslist looking for a red *DK* cab and a lady not too far away answered his call. It transpired that she'd acquired it from a local vendor who originally purchased it new as a *Radar Scope* machine. Unfortunately, it needed a lot of work.

"It was one step away from a landfill," Chris tells us. "The bezel was so scratched I could barely make out the monitor. The coin door was rusted and the coin mechs were jammed up. To make matters worse, someone had attempted to cut a hole in one of the sides. I wanted a red *DK* really badly but man, this thing was a mess."

Undeterred, Chris transported the cab home and began the process of bringing it back to its brilliant best. "*Donkey Kong* was and always will be a passion for me," he says, "and it's just as much fun now as it was back then."



CABINET

To restore my *Donkey Kong*, I began by lightly sanding down the entire cabinet to give the primer something to adhere to. All of the imperfections including the busted edge and the place where someone had attempted to cut a hole were reconstructed with Bondo putty and sanded flat. The primer was shot with a spray gun. I couldn't get the oil paint to shoot correctly so it was applied using a foam roller. The paint colour was matched by removing a red chip from underneath the coin door where it hadn't seen daylight since 1981.

MONITOR

The monitor is the original Sanyo 20EZ that has been recapped – this is where all the capacitors on the monitor PCB are replaced. It is currently using the original flyback.

BOARD

The original board had developed bad RAM somewhere. Since I don't have the expertise to do this kind of a board repair, I sent it to Dick Millikan of Auburn, Washington, who is known for board repairs. Dick sent me a working board. Being a huge *Donkey Kong* fan, it was mandatory that the Brasington kit was installed. This is an add-on kit that enables the game to save high scores. It's also necessary if you want to install the *D2K: Jumpman Returns* hack. *D2K* is amazing!

CONTROL PANEL

The control panel has been replaced with a reproduction. Interestingly enough, the original panel was using the *Radar Scope* red button for jump, which I chose to re-use. The P1 and P2 buttons are the original Nintendo dark blue. The new instruction cards are also reproduction, as well as the dust cover.

ARTWORK

The control panel itself is in good shape. It is not dented, warped, or Swiss-cheesed. The control panel overlay is in decent condition, though it has a hole worn in it at the front. I have a new overlay for it that I found on eBay about a year ago. I will install it when I restore the machine cosmetically. Regarding the joysticks, which are Seimitsu/SNK LS-30s, one of them was new when I got the machine, while the other has moderate wear.

COIN MECH

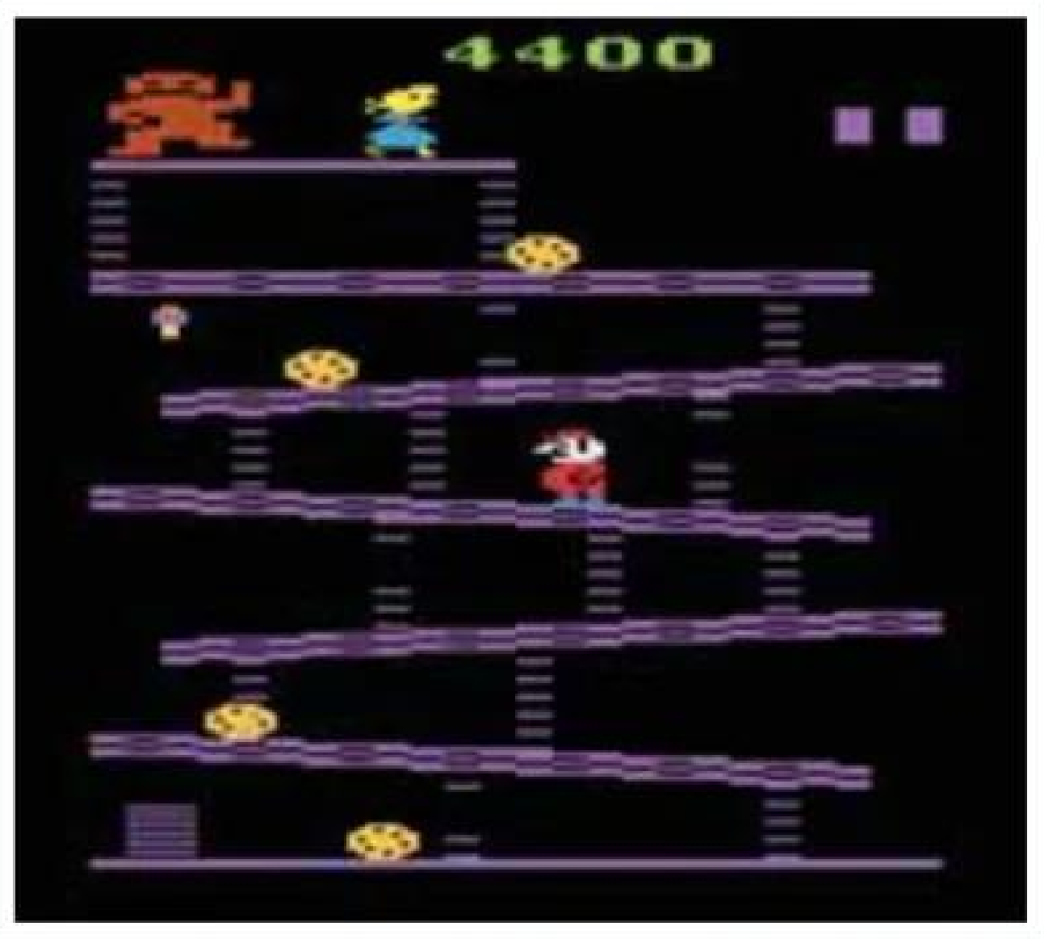
The coin mechanisms are original. I decided to paint the coin door and leave the coin entry wear marks for authenticity's sake.

developer Q&A

We speak to industry veteran Garry Kitchen to find out how he managed to squeeze Donkey Kong onto the Atari 2600

How did you get into game development?
In the mid-Seventies, while in college studying electrical engineering, I was hired by a small engineering consulting company. Among other projects, I developed and patented a handheld billiards game called *Bank Shot*, based on a 4-bit microprocessor and an array of 72 LEDs. When the Atari 2600 came out the handheld games started to suffer at the expense of the newest, greatest thing – videogames. In response, I bought an Atari machine, opened it up and reverse-engineered it so that we could compete in that space. I've been developing games ever since.

How did you land the job of converting *Donkey Kong* to the Atari 2600?
At the time, around 1981/1982, there weren't a whole lot of independent videogame developers who knew how to program the Atari 2600. I had the knowledge as I had reverse-engineered the platform the previous year. My brother Steve owned an engineering company and he had a relationship with an executive at Coleco – I believe his name was Eric Bromley. Steve got the *Donkey Kong* contract with Coleco and subcontracted the project to me. It's all about relationships.



Did you get any assistance from Nintendo?
No, nothing. My only source was the actual arcade game. I had direct access to a machine, which Coleco provided, but I didn't get to keep it!

What would you say was the most challenging aspect when working on *Donkey Kong*?
I wanted the 2600 version to look just like the arcade game, but there was a technical problem. The Atari hardware did not have enough memory to display a full bitmap background – the background memory only held enough bits to cover half the screen, so the video display driver would display either a repeating pattern or a reflecting pattern. With this limitation you could not display the slanted ramps that were such an important aspect of the look of the game. This frustrated me until I came up with a technical solution to overcome the limitation, allowing for slanted ramps. It required a rewrite of much of the code but I think it was worth it.

How long did you work on the game, and were you up against a deadline?
It was a three to four month schedule, which was about half the time that should have been allotted. The deadline was immovable, with the ROM cartridge needing to go into manufacturing in time for a holiday shipment. I worked without sleep for the final 72 hours to deliver it on time. It took me a month to physically recover from the ordeal.

The game is often criticised for only featuring two of the original's four screens. Given more time, do you think you'd have been able to squeeze in those extra screens?
There were two factors that prevented me from including the other two screens. The cartridge was 4KB in size, and the beta version of the game, after three months of labour and two screens complete, came in at around 6KB. I was over by 2KB. Bigger cartridges were available, but Coleco made the financial decision not to go for an 8KB cartridge, despite my recommendation and pleading. So, rather than having an extra 2KB to play with and add more screens, I had to spend the last month crunching out 2KB just to make the two screens fit in a 4KB cartridge. The second factor was the schedule. There was no time left. The other screens would have been impossible on the allowed schedule.

The game was a huge seller, with sales of more than 4 million units. Were you lucky enough to get a slice of the profits?
I got a very, very tiny slice. Enough to make it worthwhile, but I certainly didn't get rich off it.

Looking back, how do you reflect on the game?
Not to pat myself on the back, but I still love the game. I thought it turned out pretty well. From my perspective I focused on the quality of the game experience that was in the cartridge rather than lamenting the fact that the other levels were missing. I really wanted to get the iconic first level, with Mario jumping over barrels, to feel as close to the arcade game as possible, and I'm comfortable with how that turned out.

These days you're involved in iPhone development at AppStar Games. What's your take on the Apple devices' importance?
The importance of the iPhone cannot be overstated. The single most important thing it has done is change the buying habits of the videogame consumer. Two years ago my eight-year-old son would ask me for a $30 cartridge for his Nintendo DS. Today he asks me if it's okay to download a $0.99 iPhone game, and he's equally satisfied with the experience. Apple has taught the consumer that good games can be had for under $2 and the games industry will never be the same. The genie is out of the box and the industry will never get it back in. ✱

The conversions

Naturally, one of the most popular arcade games of all time has more than its fair share of home conversions. Here is the lowdown…

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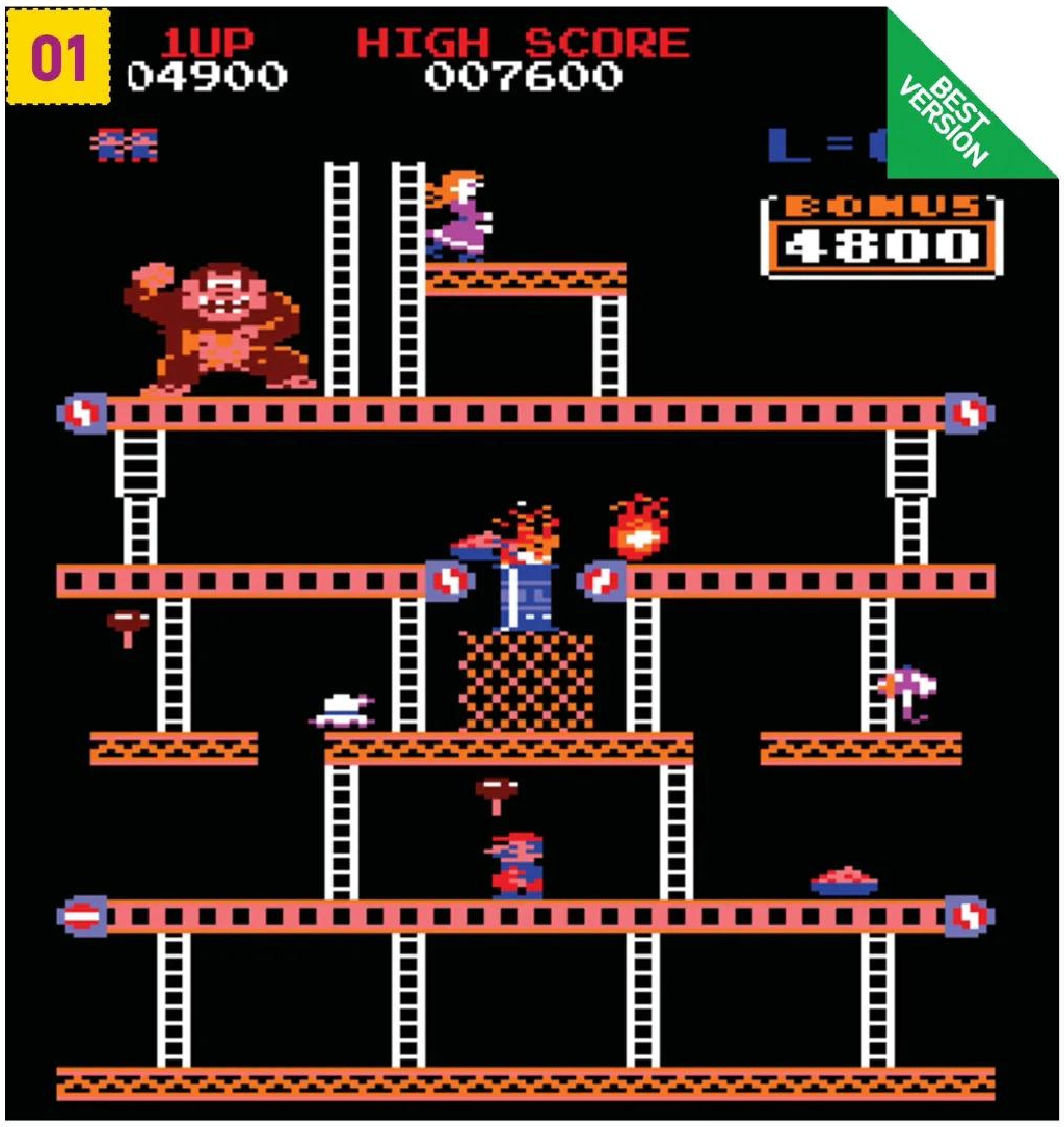

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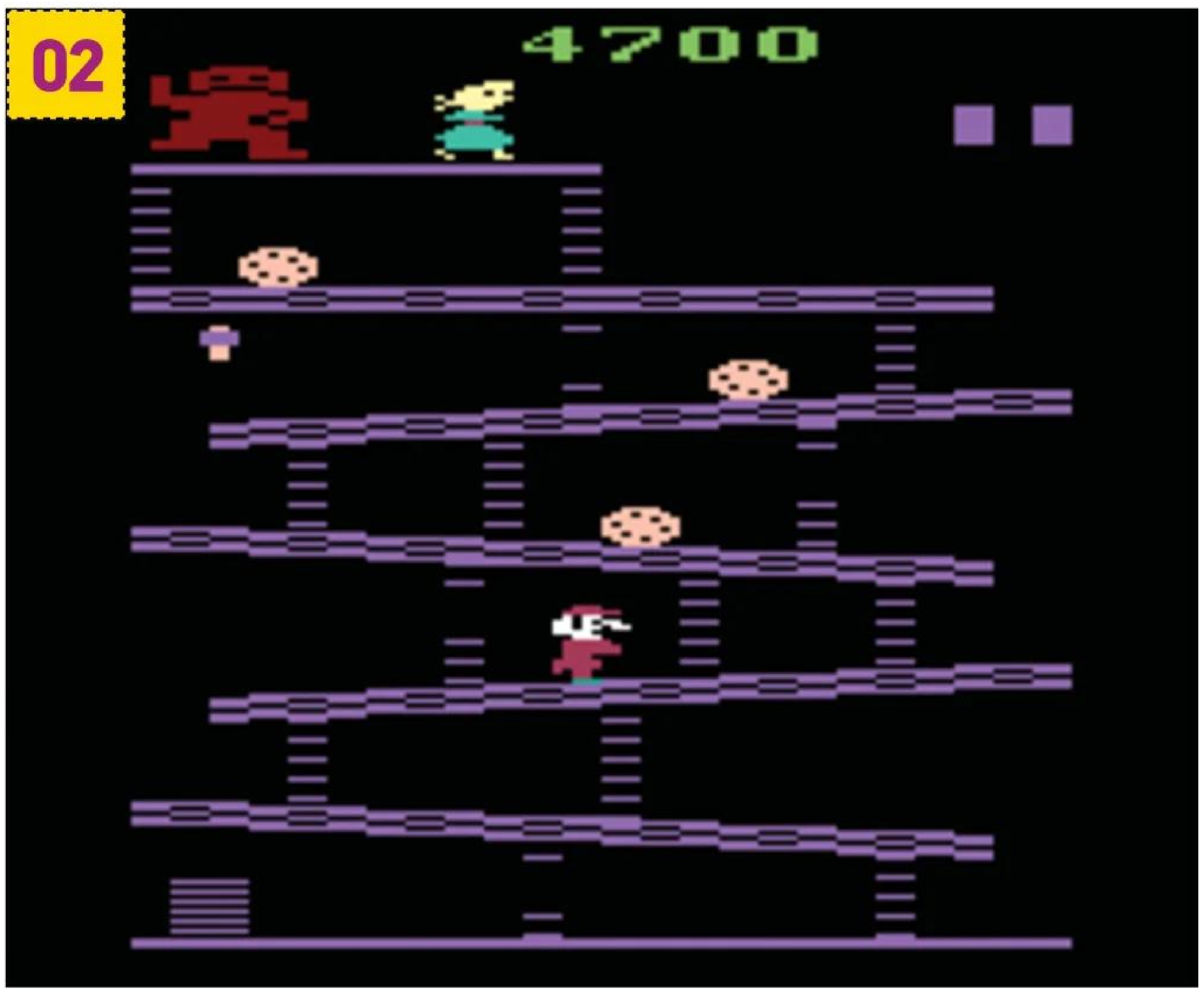

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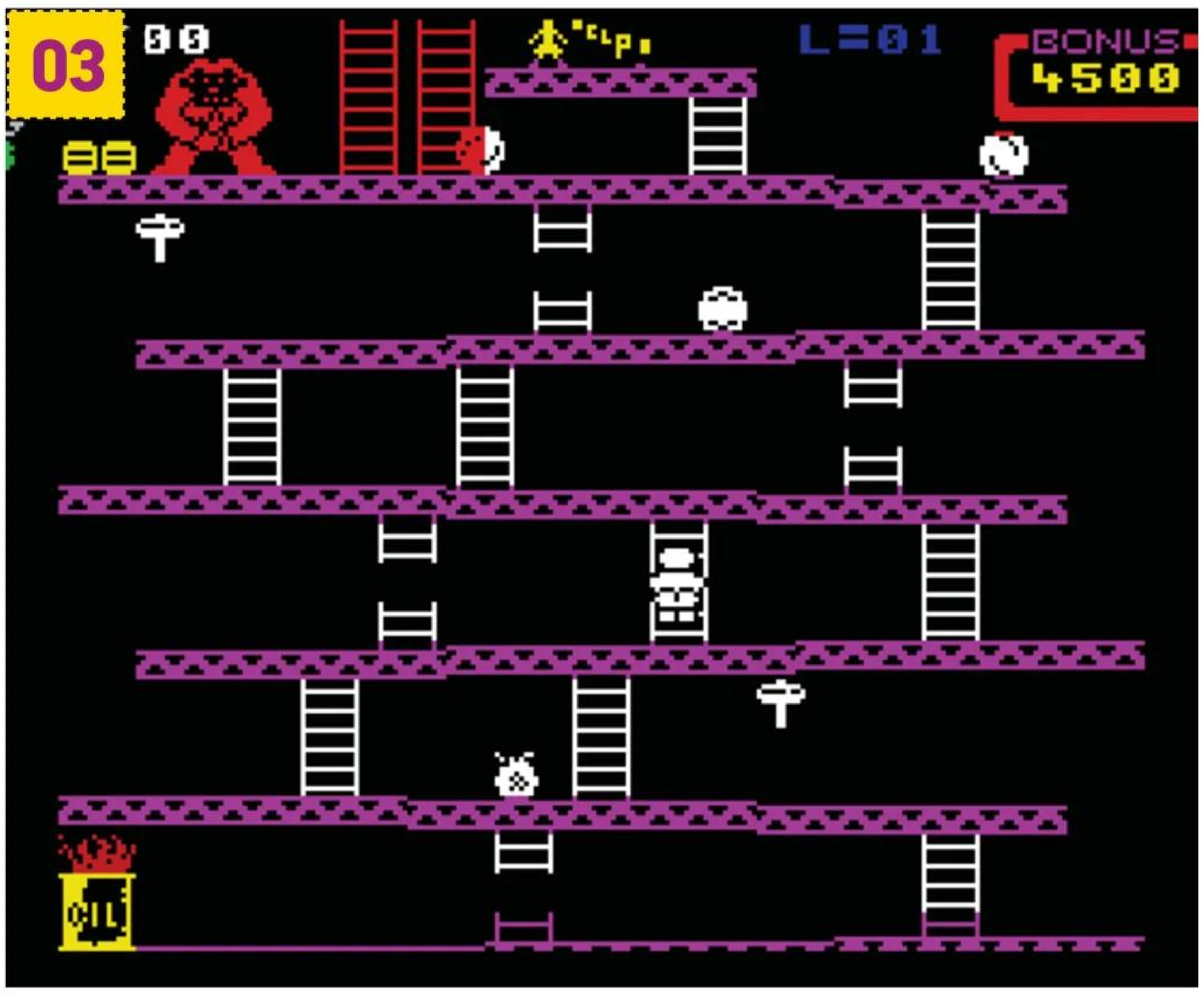


01. CPC (Best Conversion)

That Stuart Campbell awarded it the prestigious accolade of best 8-bit arcade conversion of all time back in issue 76 should be a big indicator of how good this version plays. Featuring big, bright colourful visuals, faithful gameplay, and all four stages, it's a nigh-on perfect conversion for Lord Sugar's unfairly mocked wonder machine, which is why we're awarding it best conversion.

02. Atari 2600

This is a poor conversion, even by Atari 2600 standards. It's missing two stages (Cement Factory and Spring), DK looks like a deranged gingerbread man, the barrels look like cookies, and the behaviour of the enemy flame sprites – they simply yo-yo from one end of the screen to the other – is easy to circumvent. The controls aren't great either.

03. Spectrum

Poor graphics aside, the intensity at which Kong lobs his barrels is relentless, and coupled with Mario's weedy jump is a perfect recipe for irritation. In this version it also takes Mario an unnecessarily long time to climb ladders – although this might have something to do with the giant arse that Sentient Software has retrofitted him with, only visible when he's climbing ladders.

04. C64 (Atarisoft)

This superb version by Douglas D Dragin is another great port. Released in 1983, it's the first official port to include all the stages – impressive considering it was one of the earliest titles for the C64, and subsequent ports on machines boasting far more tech managed just three. With great presentation, and the option to tweak the difficulty of the game, this is generally the more popular of the two C64 versions that saw release.

05. C64 (Arcana)

As well as the great Atarisoft offering, C64 owners received this equally impressive one by Arcana, which also did the CPC version. Featuring all four stages – although this time it's worth noting that they follow the original Japanese level order – great sounds, smooth gameplay and all the cut-scenes, it's another great conversion.

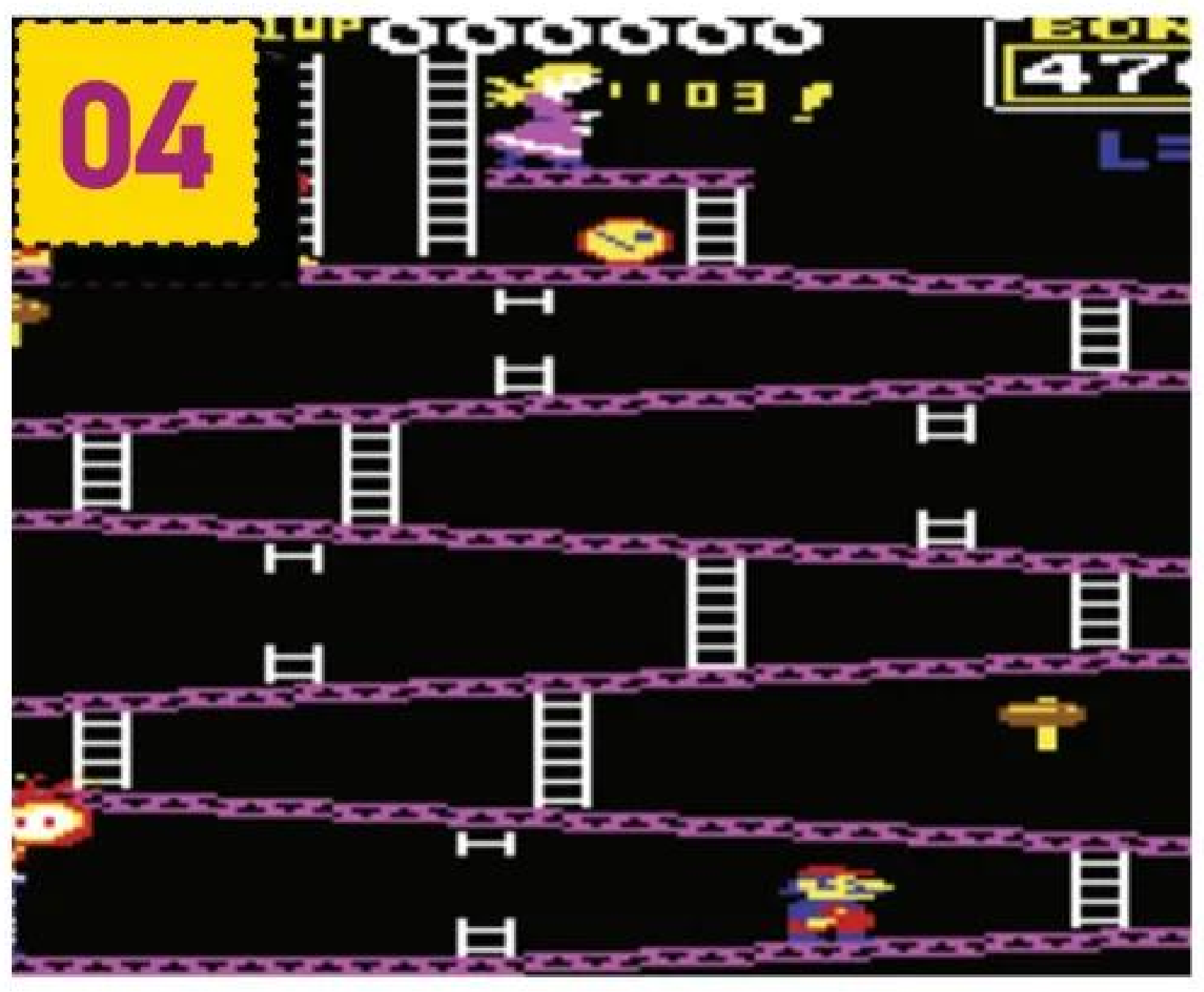
06. NES

As you would expect being on the NES, and from Nintendo, this is a great conversion. The visuals look authentic, and the gameplay and controls are solid. It's missing the Cement Factory stage and the sounds and music differ from the arcade version. This is the most popular of all the home conversions, which is why the cart stayed in production for a staggering five years.

07. Apple II

Despite no Cement Factory, this conversion still offers an authentic game of *DK*, delivering some of the more trivial

04



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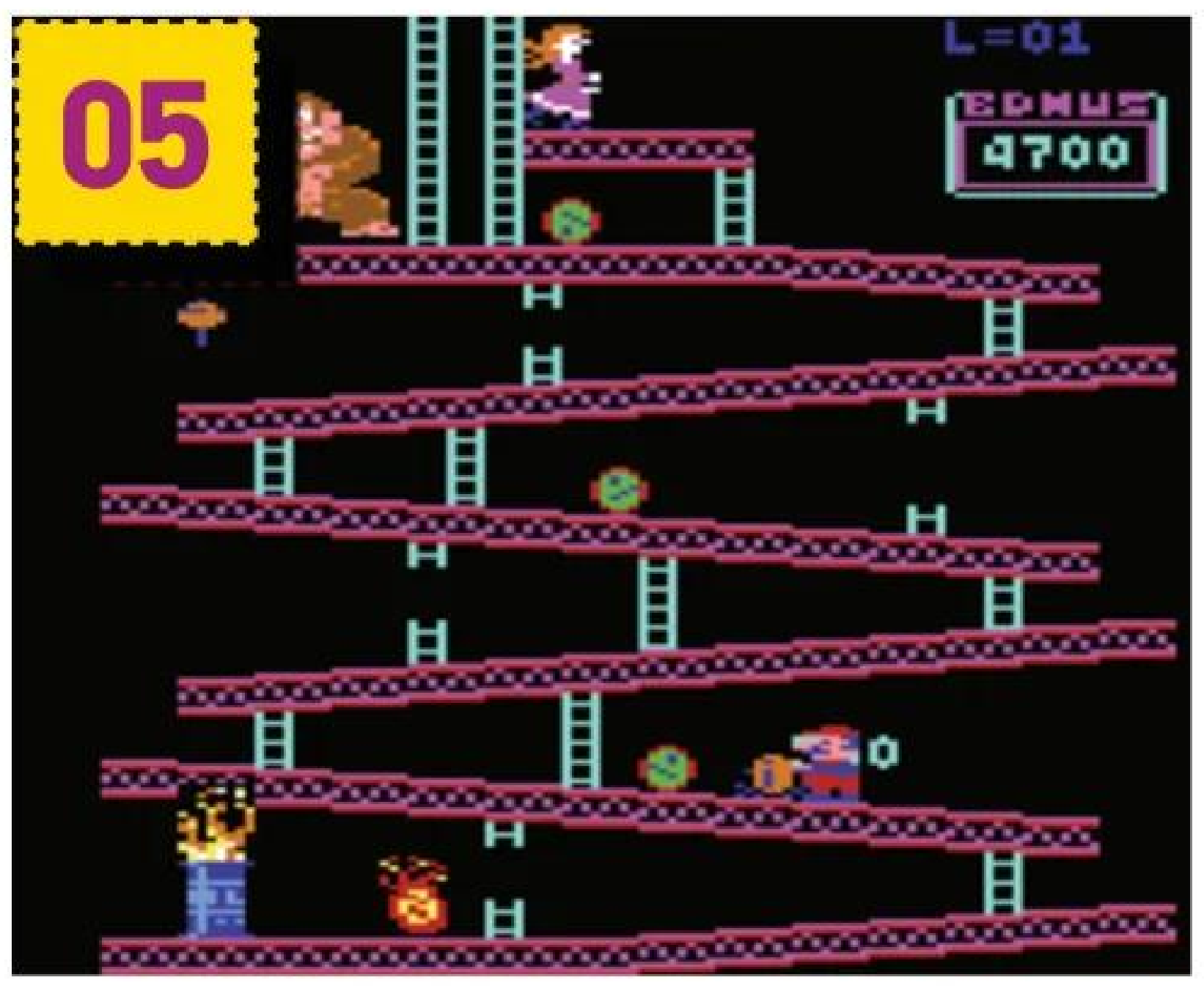

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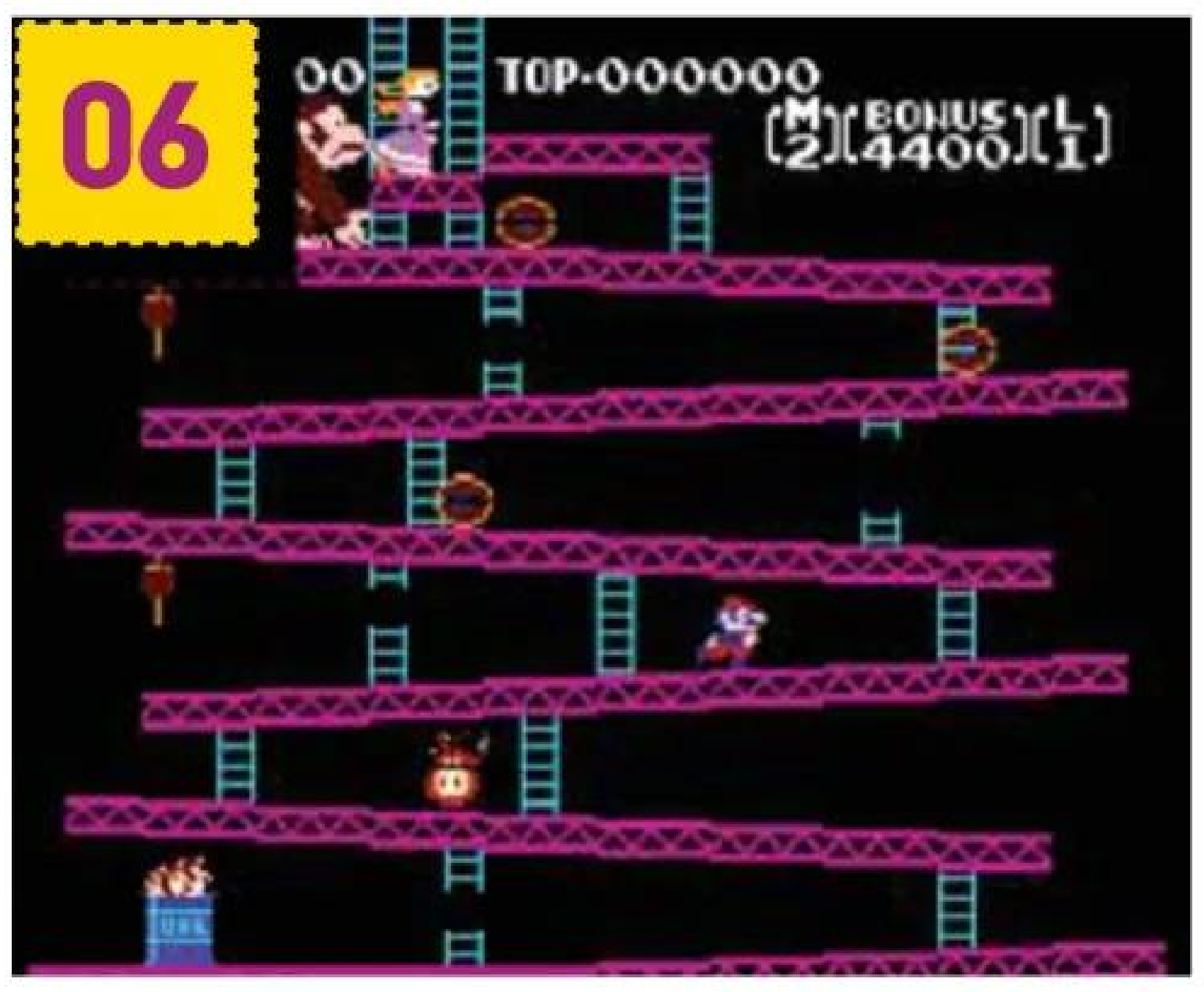

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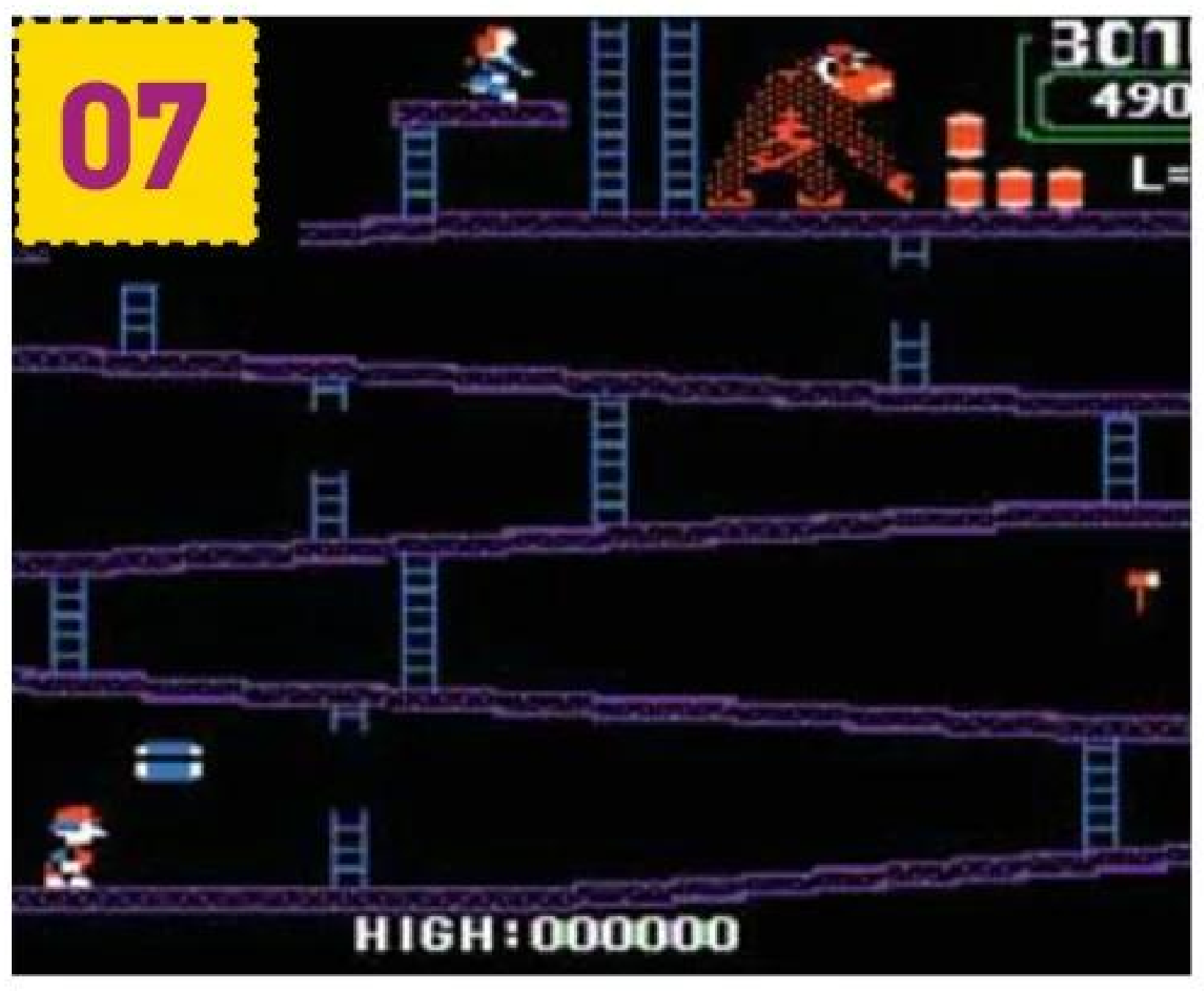

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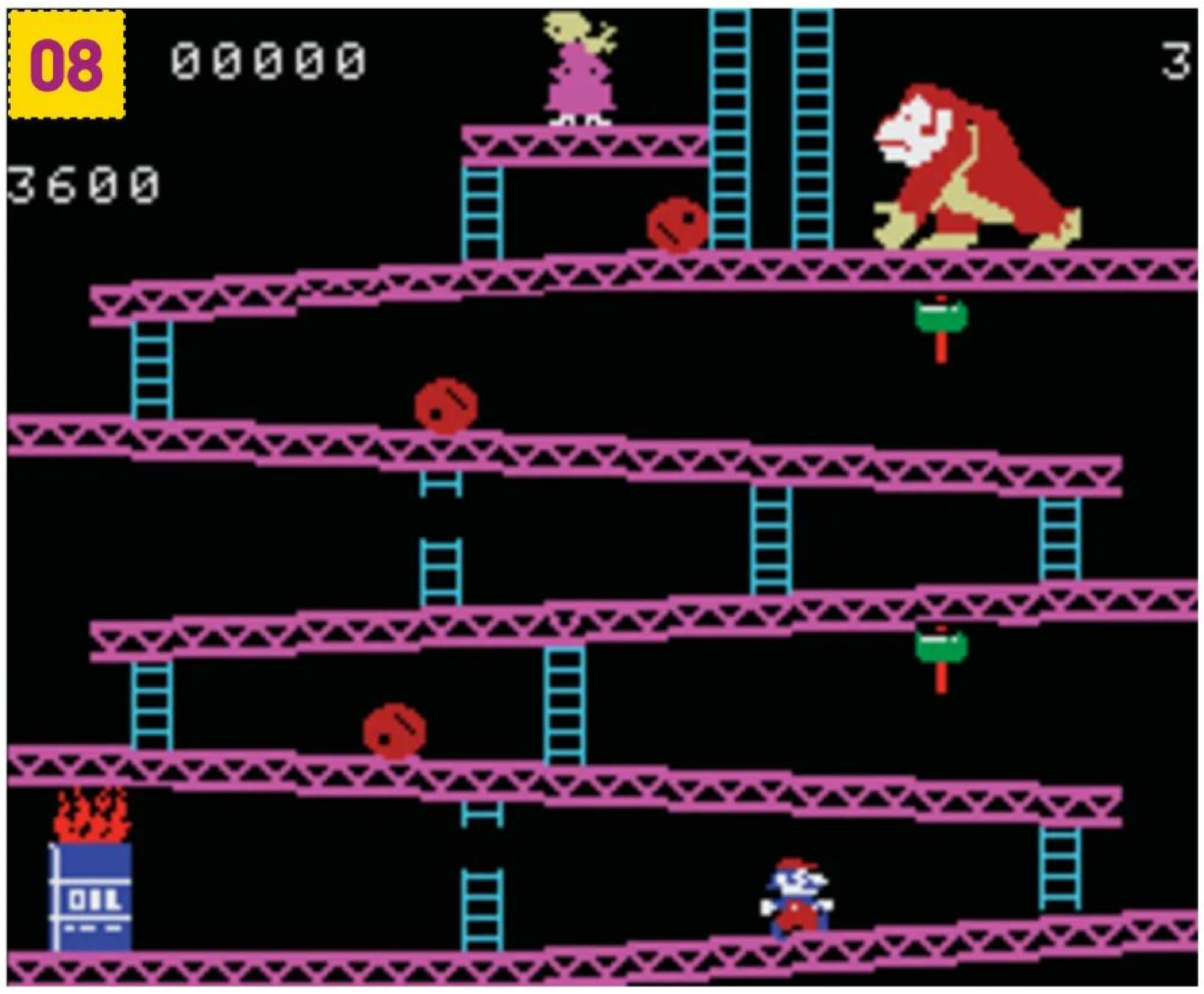

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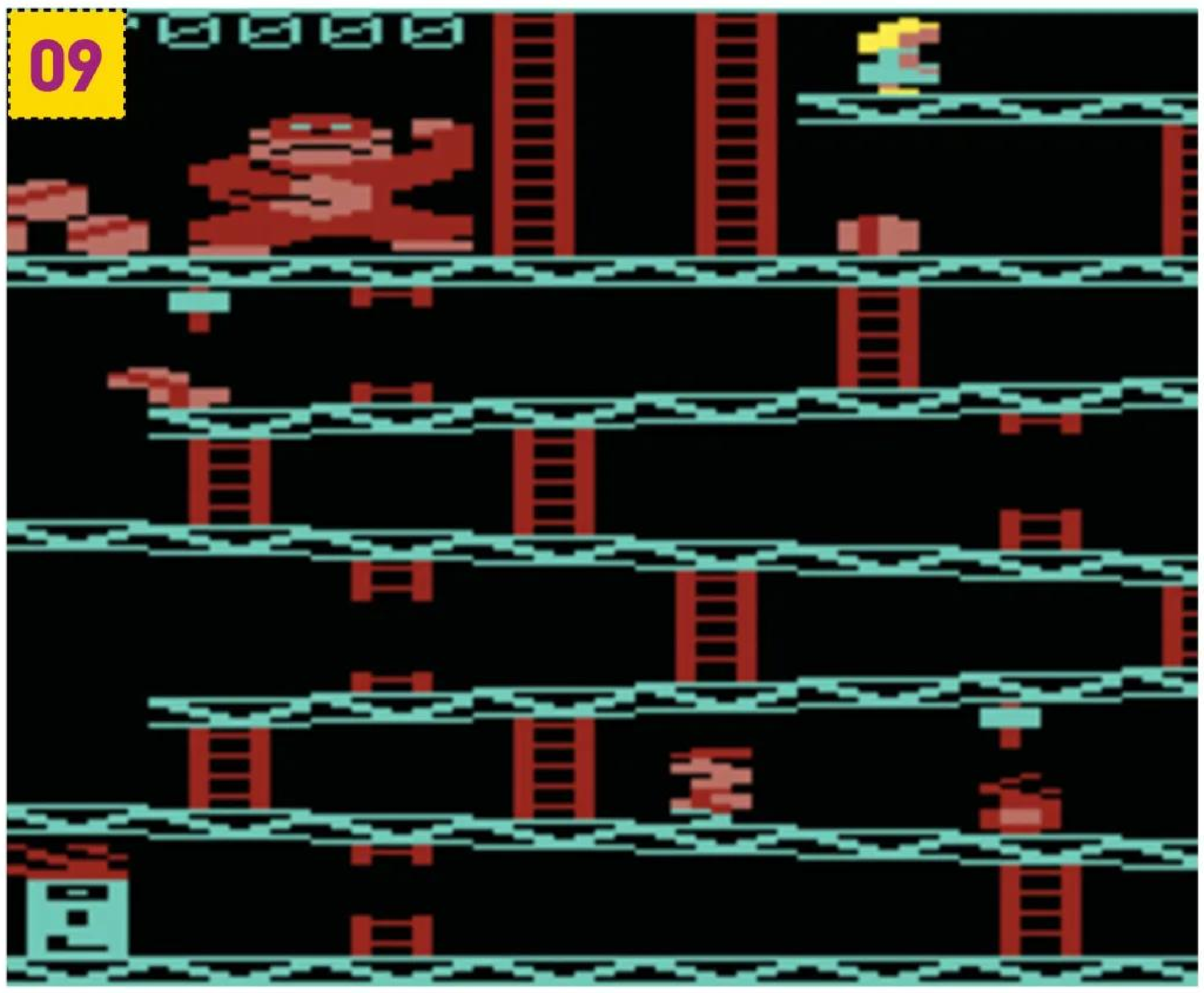

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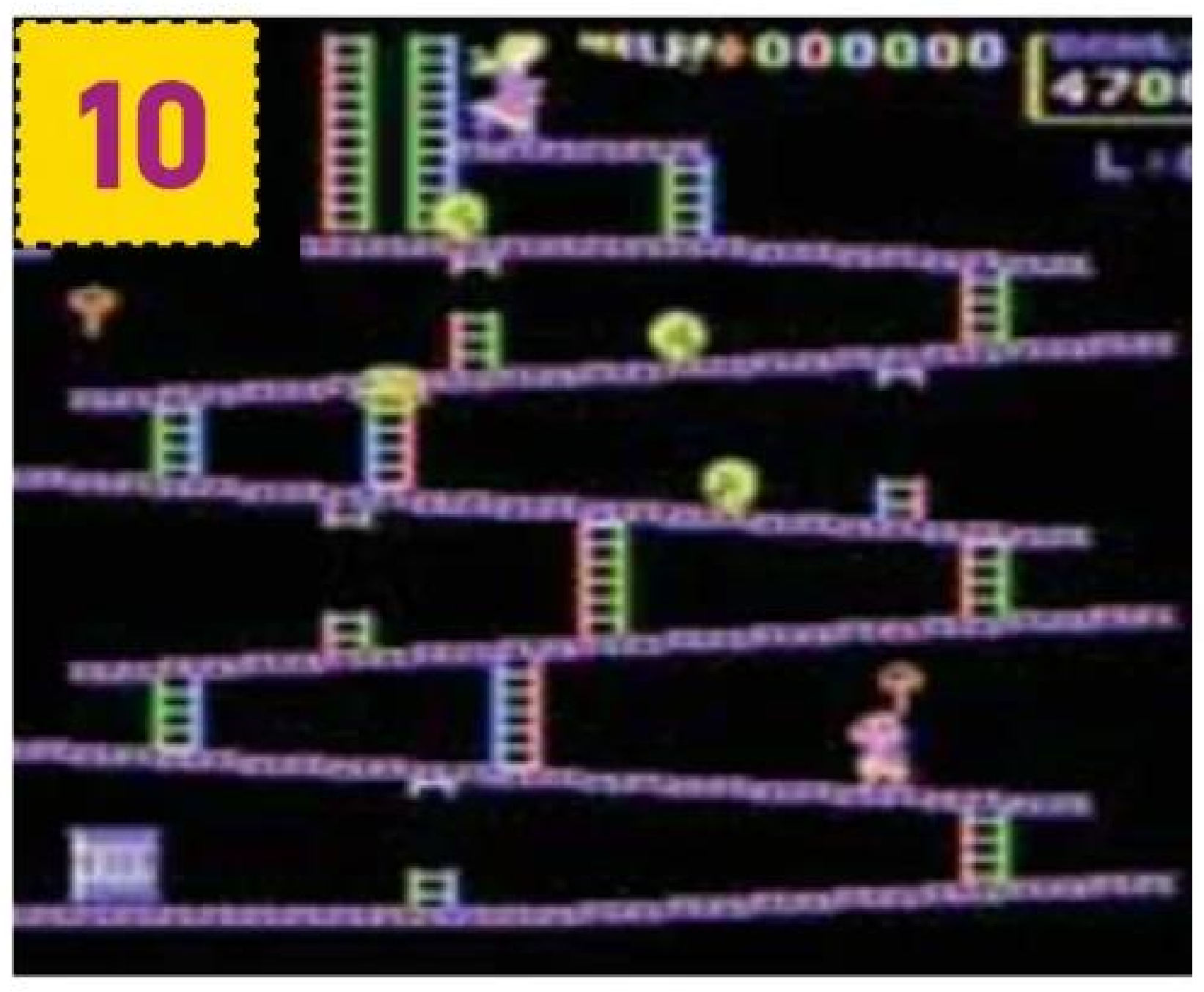

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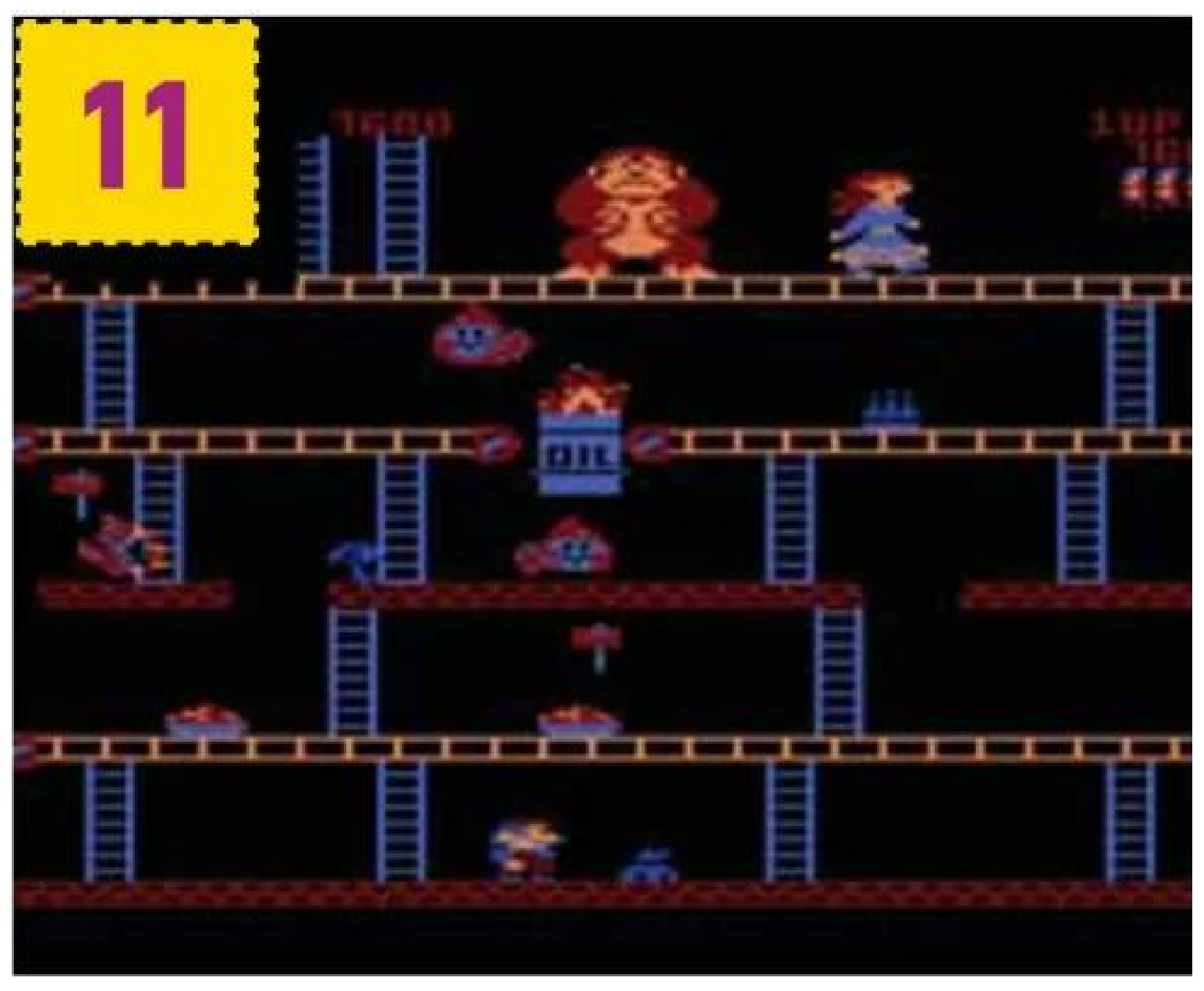

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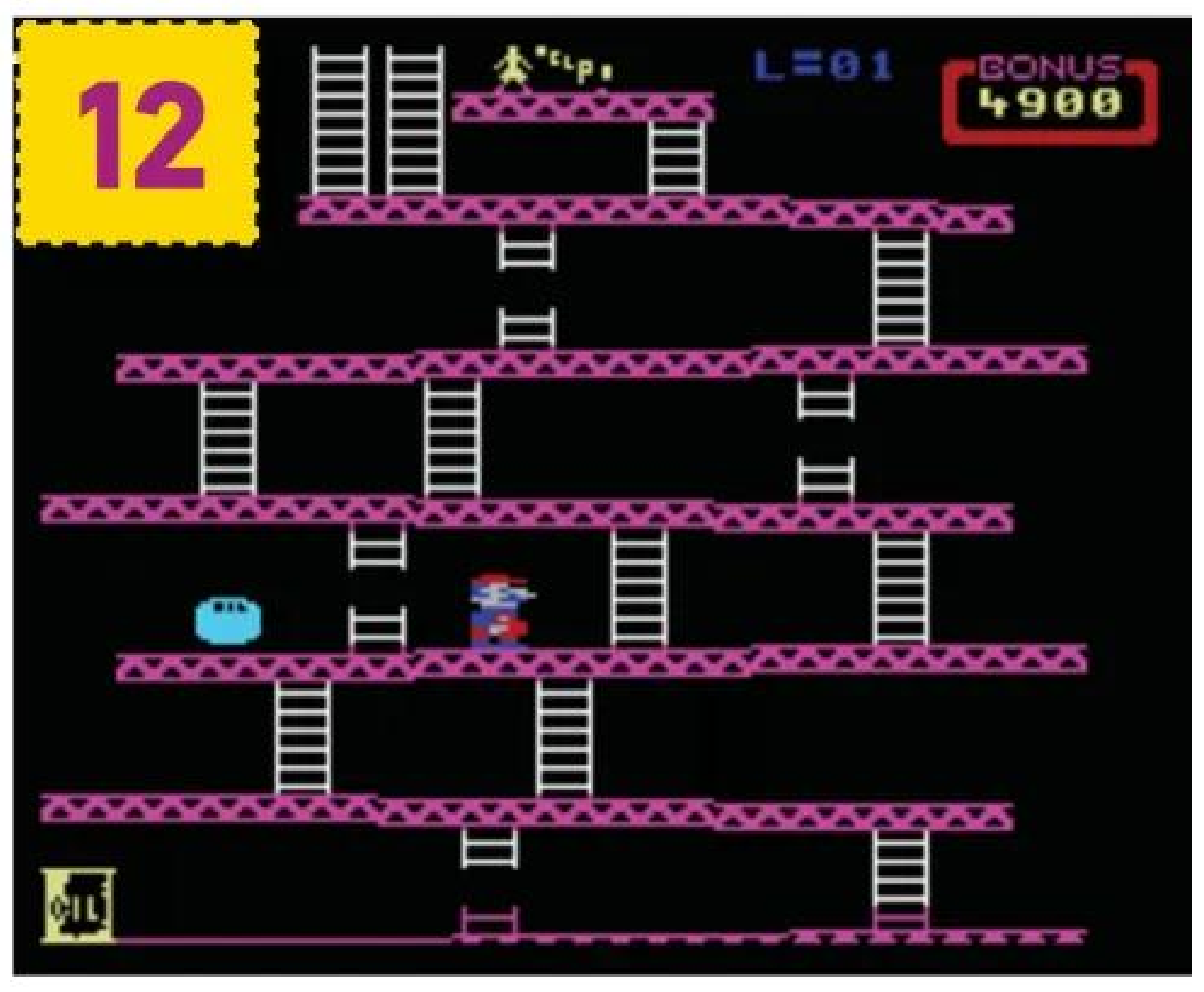

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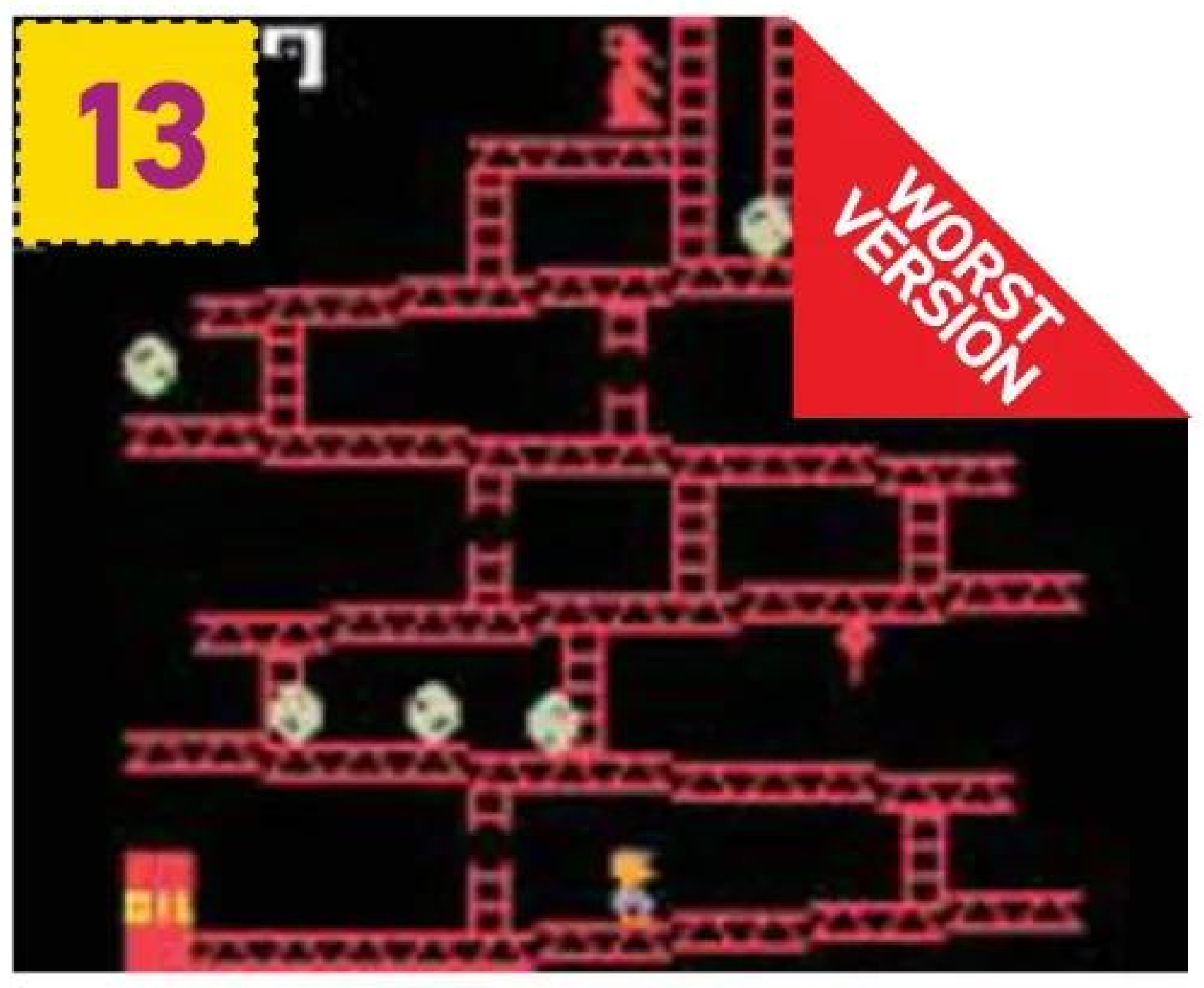


elements of its arcade parent – such as the 'how high can you get' intro screen and the inclusion of Pauline's girly possessions – at the price of good graphics and sounds. It's the nippiest conversion of the game out there, and one of a handful to allow players to tweak the difficulty.

08. ColecoVision

Once again no Cement Factory stage, but nonetheless a decent effort that looks and plays well. Unfortunately its controls let it down, though this has more to do with the inaccurate nature of the console's disc-stick controller than anything else. Coleco also released a version for its Coleco Adam computer. It doesn't look as good as the console port, but it does include all four stages.

09. VIC-20

The graphics are below par, and the game isn't very smooth, but it's not all bad news: the game sounds fantastic, and, amazingly, features all four stages, which is really quite unbelievable. This is as good a job as Atarisoft could be expected to muster up on the modest tech. Taking this into account, this is another decent conversion of *DK*.

10. TI-99/4A

Biggest surprise of the night, though, goes to this fantastic conversion for the TI-99/4A. While the visuals look a little washed out, and the sound effects are painful, the sprites do look nicely detailed and the game is the complete package featuring all four levels from the arcade game in the US order. The gameplay is nice and smooth too. A great conversion.

11. Atari 800

Without doubt the best version to be found on an Atari machine, and was another of a disproportionate number to include all four stages. There are slight differences to the arcade original that only astute *Donkey Kong* fans will pick up on, but most will see this as a good-looking and complete port that certainly puts the dismal 2600 effort to shame.

12. MSX

Unsurprisingly, the MSX conversion, which was also by Sentient Software, suffers from the same issues that plague its similar Spectrum port – namely it doesn't look great and Donkey Kong seems to be working himself into an early grave at the top of the screen. This is probably the worst of all the conversions published by Ocean.

13. Intellivision (Worst Conversion)

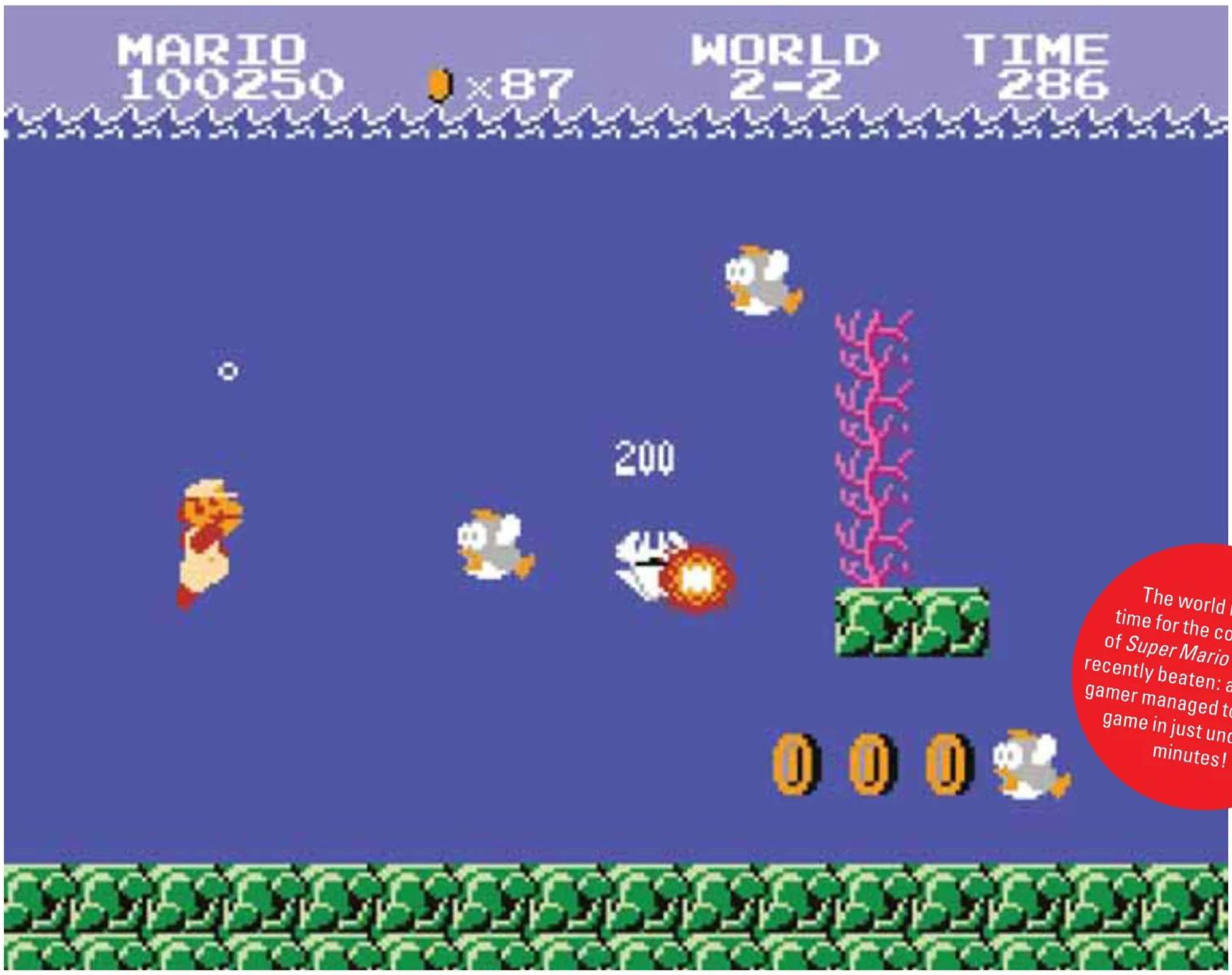
Mario looks like Q*bert in dungarees, Donkey Kong like Swamp Thing, and Pauline like an orange dinosaur. It only features two stages and it controls like a dead body. It's rumoured that this version, developed by Coleco, was so bad that, upon seeing it, Mattel thought the company was trying to sabotage its machine. We can believe it.

GAME CHANGERS

SUPER MARIO BROS

RELEASED: 1985 **PUBLISHER:** NINTENDO **DEVELOPER:** NINTENDO R&D4 **SYSTEM:** NES/FAMICOM

The sequel to Mario Bros, Super Mario Bros popularised the side-scrolling platformer and added multiplayer to what became Nintendo's flagship title



The world record time for the completion of *Super Mario Bros* was recently beaten: a dedicated gamer managed to finsh the game in just under five minutes!

Originating as a coin-operated game back in 1985, *Super Mario Bros* eventually became synonymous with the NES – establishing itself as a killer app for the Eighties console. The platformer was a spiritual successor to *Mario Bros* – a game that attracted a fair share of attention in its own right – but in adding the Super prefix (a trope that would come to define Nintendo sequels and spin-offs), the developer managed to create a game that would come to define the platform genre outright.

The game is not only a classic – generating a buzz on its Japanese and Western releases through, mostly, the rare gift of positive word of mouth – but it also stands up to the test of time. The game remains a relevant and valid example of platforming done well; *Super Mario Bros* popularised the side-scrolling platformer, and the genre has since seen many contenders attempt to knock Mario off his pedestal atop the platforming throne. Few have come close, none have succeeded, and the superiority of *Super Mario Bros* comes down to one aspect: its mechanics.

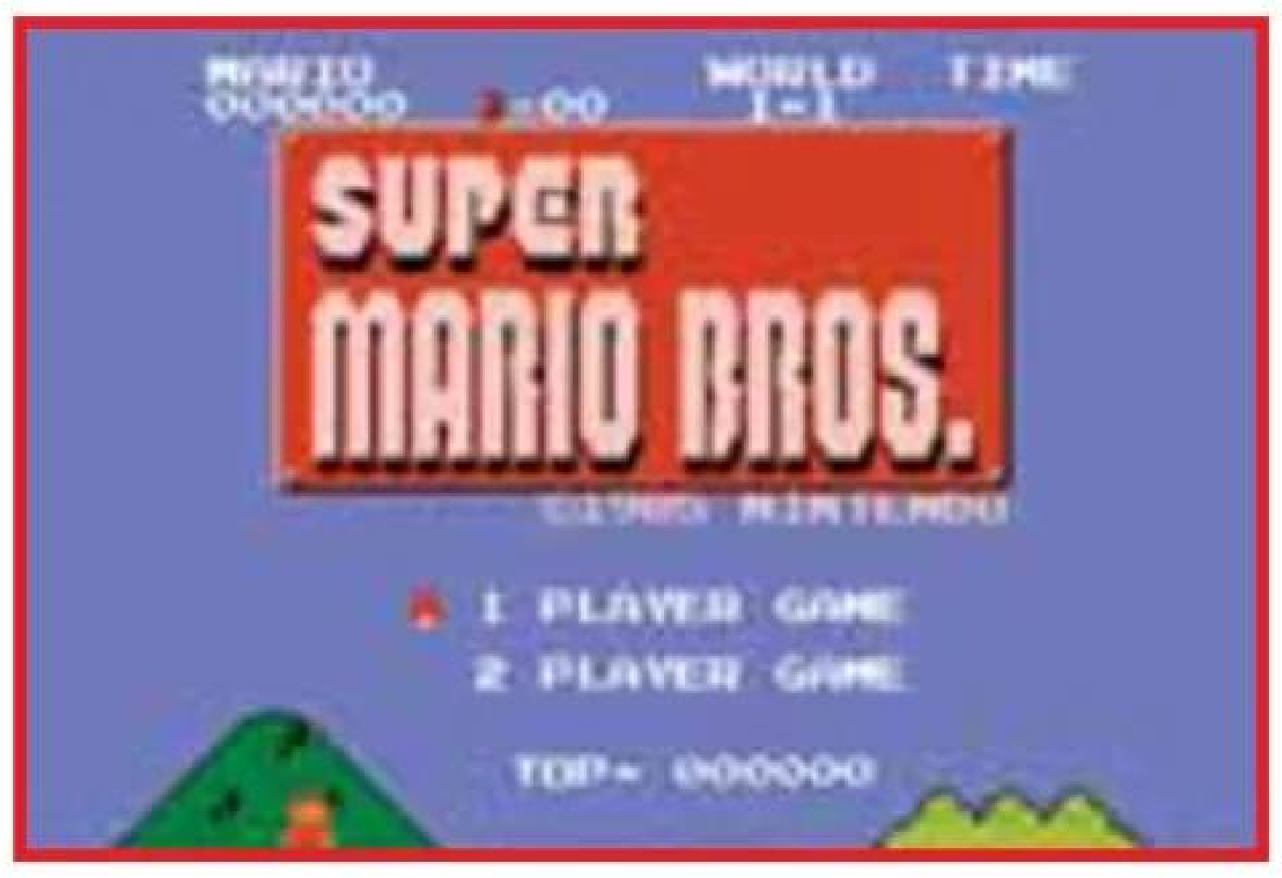
Oddly, in a world of moustachioed plumbers, lizard-dragons and Shy Guys, *Super Mario Bros* is defined by its realistic mechanics. For an 8-bit game, the momentum and subtlety behind Mario and Luigi's movements was incredibly deft, operating on a system that you could understand from the first time you picked up the pad, yet would probably never master. The physics were analogous to real life; if you wanted to attempt a large jump, you'd have to get a running start. Conversely, if you started Mario off on a run (which was wonderfully animated with his stodgy little hands pumping up and down at his sides), you'd have to give him a margin of space to

DISSECT MARIO

SUPER MARIO BROS IS PROUDLY PARADED BY A SLEW OF DEVELOPERS AS A HUGE INFLUENCE IN BOTH THEIR LIVES AND THEIR WORK

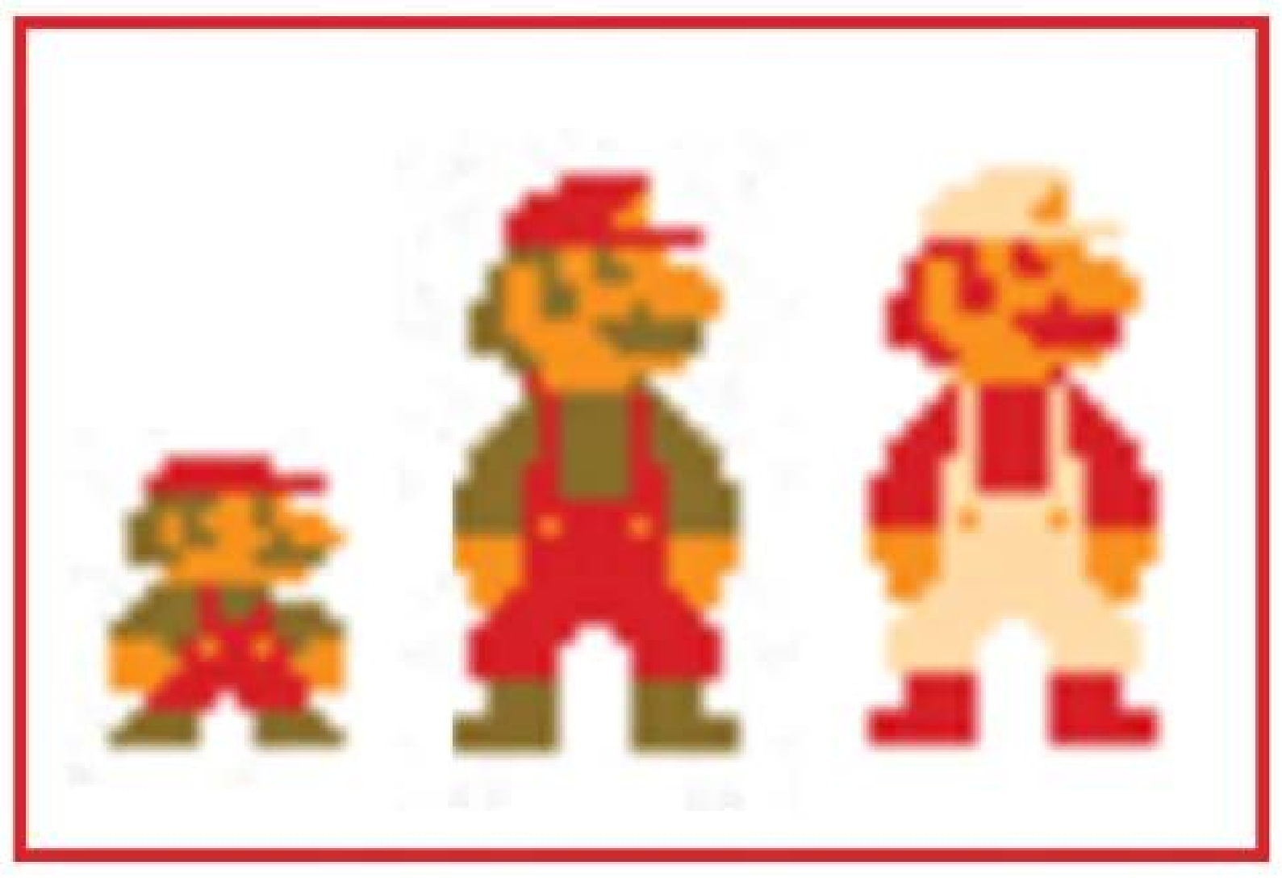
THE IMPENDING DEATH OF FAMICOM

★ Miyamoto was motivated to create a game that would be a respectable farewell to the NES cartridge system when Nintendo put forward the idea for a disk-based console to take its place. After talking about progressing Nintendo's 'athletic games' remit, the core idea for *Super Mario Bros* was born.



MARIO BROS

★ Miyamoto's first foray into the Mario world was more of a proof of concept than anything else – it was *Super Mario Bros* that took the franchise into the mainstream. Before, Mario flipped turtles before stomping on them – this was later deemed illogical, hence the bounciness of the platformer we have now.



ACCIDENTS

★The shifting size of Mario was never actually intentional – in the prototype stages of development, *Super Mario Bros* only had 'small' Mario, but when the development team altered the size of the levels and Mario stayed the same (becoming 'big'), Miyamoto decided to make Mario 'big' through power-ups.

MAGIC MUSHROOMS

★ Yep. Once the size-changing mechanic was agreed upon, Miyamoto took his influence from folk tales that were based on villagers wandering into forests, eating 'magical mushrooms' and changing sizes – hence why Mario's world became known as Mushroom Kingdom. Who would've guessed it?

come to a stop in. Critics of the game called the mechanics slippery, but this didn't deter the fans – players who would stick with Mario and his bizarre world indefinitely – who fell in love with the peculiar momentum Mario popularised.

The bounciness of Mario's world also appealed to those first coming into gaming proper – jump on an enemy, and you'll have to fine-tune your landing. It wasn't a matter of simply killing your enemies; that was only half of the battle. The game took full advantage of this, introducing an eclectic cast of villains that took full advantage of the seemingly limited scope that Mario had in his movements. Some would require tackling from above, some avoiding altogether, some only vulnerable at certain times. The power-ups – hidden in boxes that could be completely missed, if you weren't attentive enough – were sparse enough to keep the game challenging, but occurred often enough to always be fun, always worth getting. The game's level of challenge was perfectly attuned, suitable for all ages and never too easy or too hard for any party to take issue with: the bosses, too, each required dexterity and reflexes to overcome, pushing the simple A, B, and D-pad of the NES to its feasible limit without ever becoming pad-breakingly frustrating.

> **"SMB opened up a whole realm of possibilities for interesting and diverse move-set designs"**

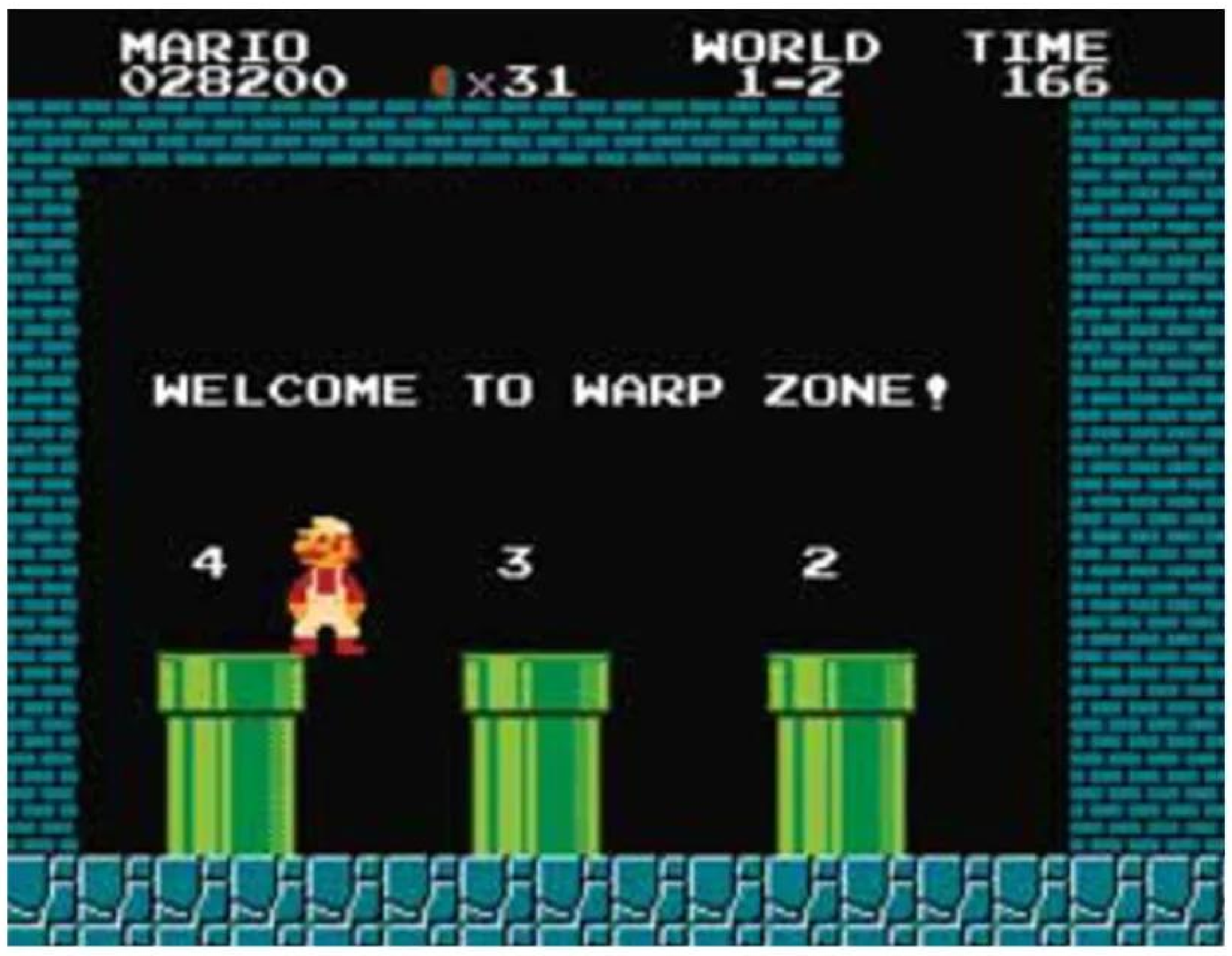
The enemies were complemented with level design that made the most of the tight physics, too. The need to constantly alter your vertical position after jumping was highlighted with staggered overground worlds that had high and wide platforms, forming paths into the clouds that felt wondrous and unique. The need to tune your position on-screen as you fell, and delicately press 'Jump' for differential heights, was played upon in the tighter, much more claustrophobic underground sections, too.

Both overground and underground sections were augmented by destructible environments that could throw a curve ball into the mix at any time, plopping you back on a lower level and interrupting your masterplan for completing the level in record time (the game has gone on to become a popular one with speed runners). On top of that, there was even a slew of secret levels tucked into various nooks and crannies of the various worlds, wresting you out of your comfort zone and throwing you into a bonus round of whacked-out weirdness. Nintendo's game is one that really rewards exploration and its tight design still holds up brilliantly today. It was all part of the formula that would come to define Mario and his erstwhile franchise, and it was all operating at 100 per cent efficiency from the start.

Everything you'll play in a platforming game of any type nowadays inevitably owes a nod to *Super Mario Bros*, and it's awe-inspiring to think about just how solidly Nintendo's seminal side-scroller established the genre. ✱

KEY FACTS

- *Super Mario Bros* is the second best-selling game of all time, with a 40.24 million copies sold record – behind *Wii Sports*' ridiculous 82.45 million sales. (The fact the top two spots are held by Nintendo is telling.)
- The score for *Super Mario Bros* was originally a lot slower, but composer Koji Kondo upped the tempo of the six featured tracks when he saw players testing the game to match the quick pace of play
- The original pitch for the game included a shoot-'em-up stage where Mario would fire bullets at enemies from cloud platforms



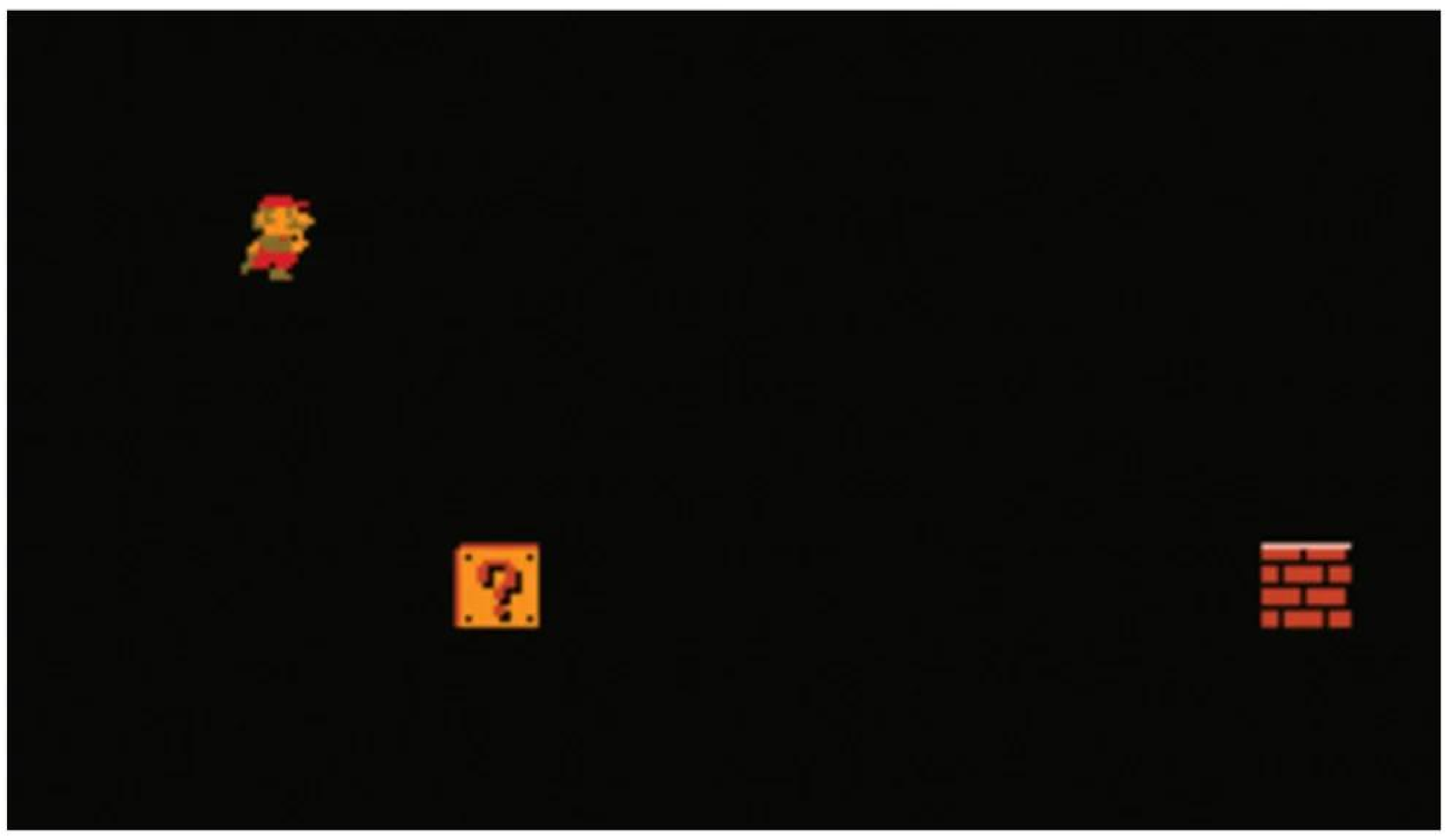
WELCOME TO WARP ZONE!

» These secret areas allowed you to skip levels. Most are very well hidden.

GAME CHANGERS

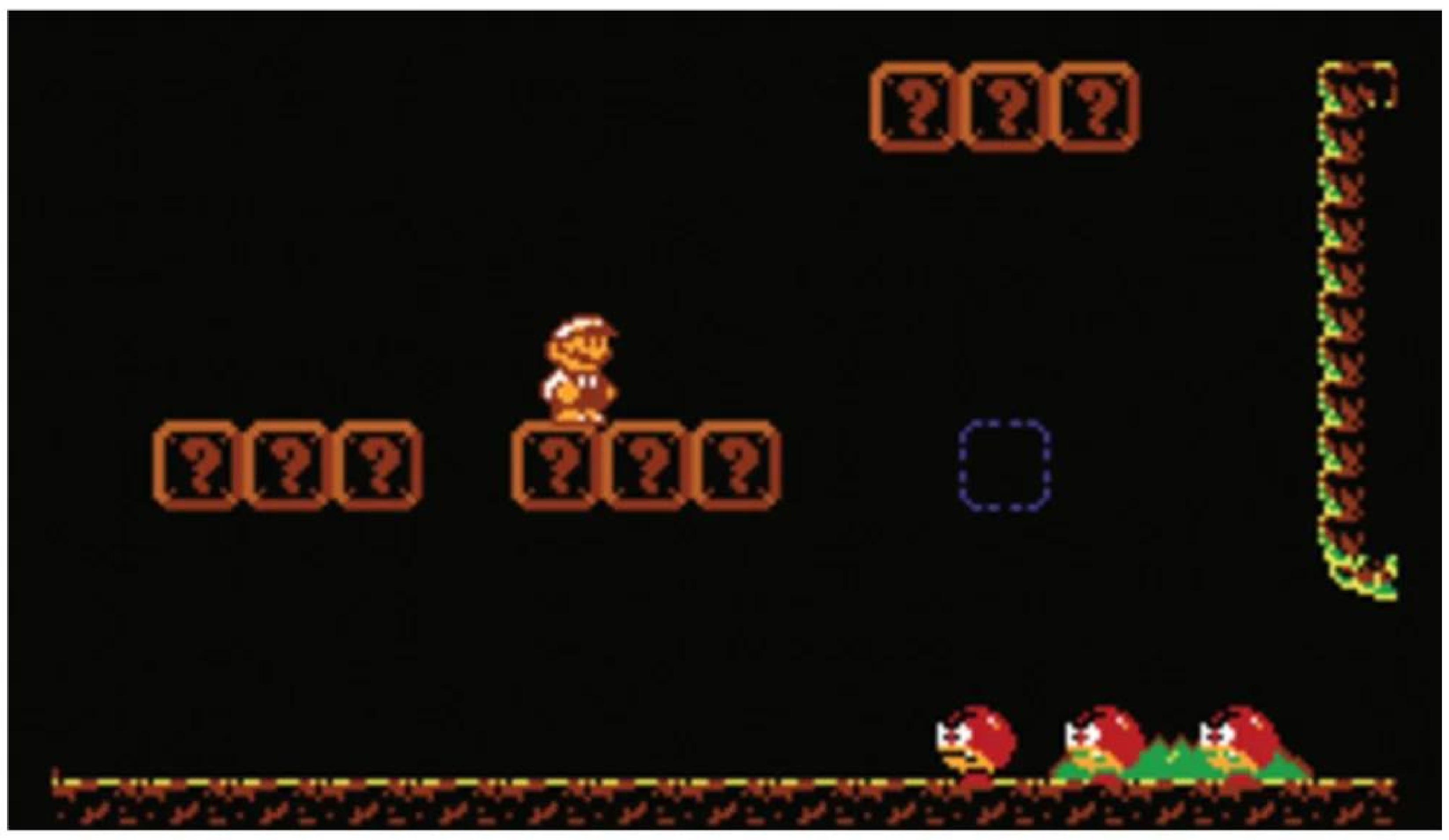
THE BEST SUPER MARIO BROS HACKS

The great thing about games as simply constructed as Super Mario Bros is that they are easier to reverse engineer than their modern-day counterparts. This leads to some great custom games seeping into the public domain – Super Mario Bros is famous for having a vast array of hacked versions, so we compiled our favourites for your reading pleasure



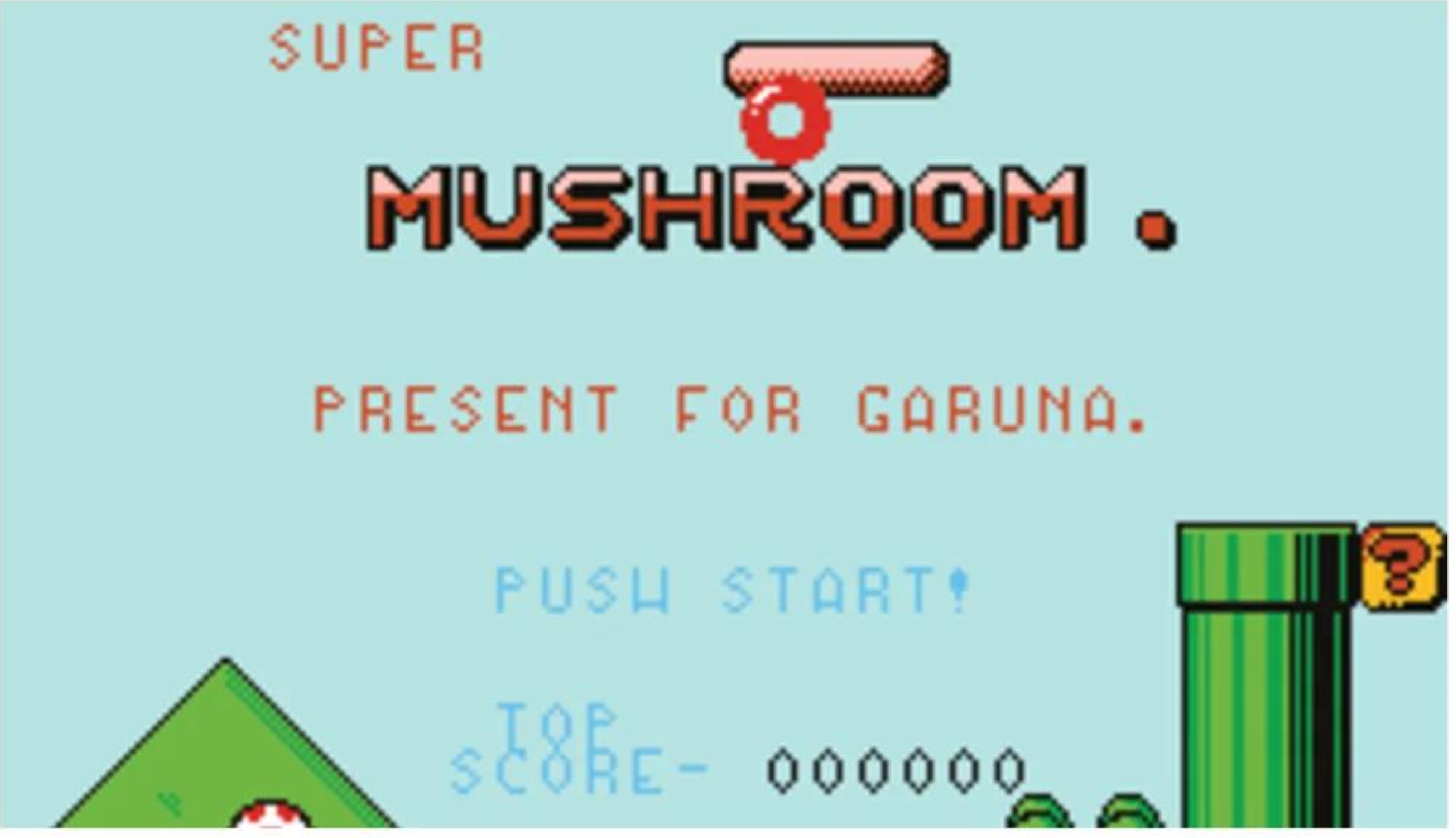
SUPER MARIO FRUSTRATION

■ A minefield of invisible blocks and obstacles impede your progress through every single level of this fiendish re-creation of *Super Mario Bros.* We played a few levels of it, and will happily say it's harder than *Dark Souls.* If you don't believe us, take the challenge yourself – you'll soon understand why we said it.



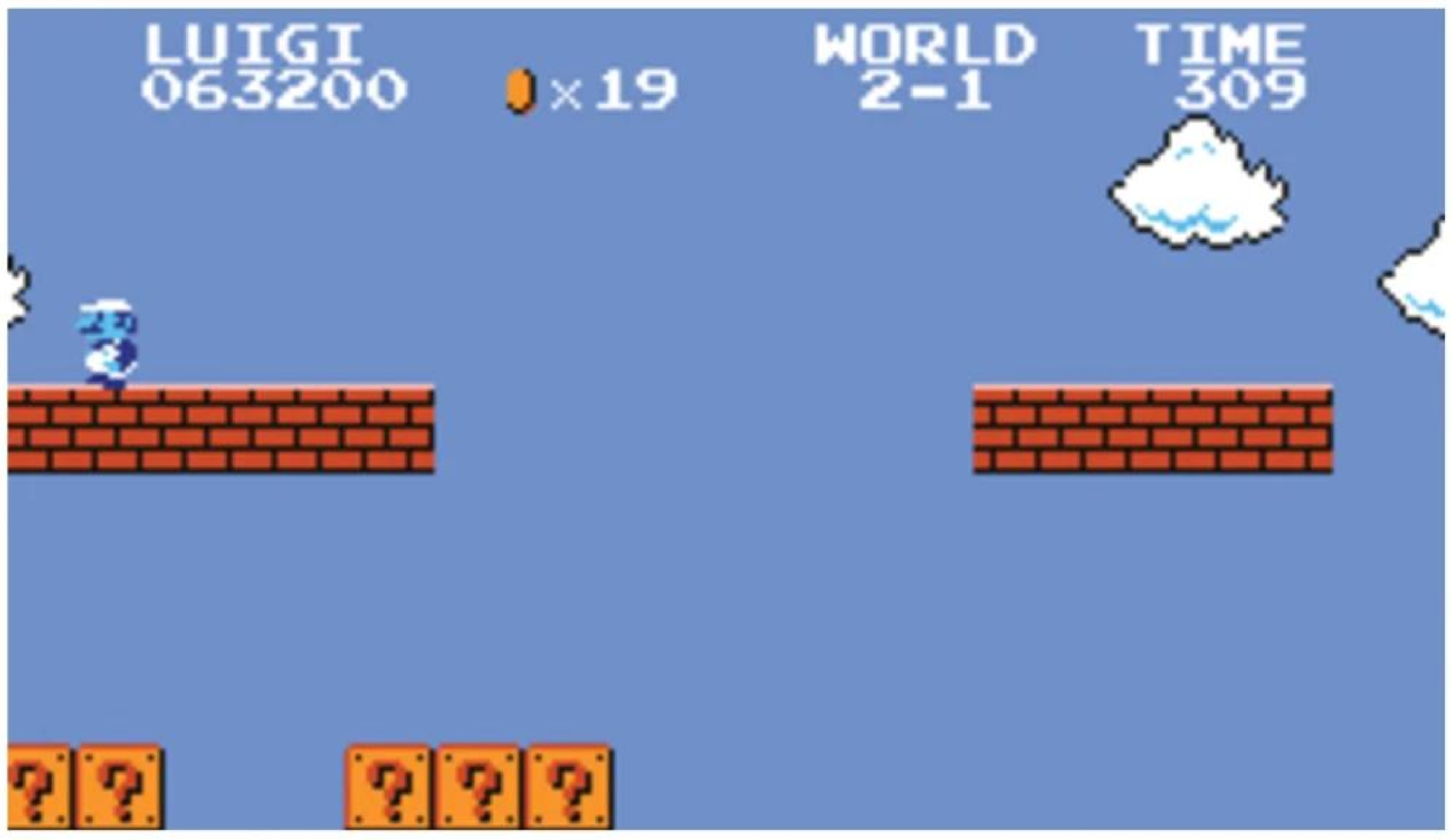
EXTRA MARIO BROS

■ A hack that adds new maps, new graphics, new enemies and new power-ups to the game, *Extra Mario Bros* sometimes doesn't hit the Mario template one-for-one, but it's worth playing through just to get to the final boss battle. It's quite a stretch from what you'll be used to seeing in *Mario* games, but it's worth a play.



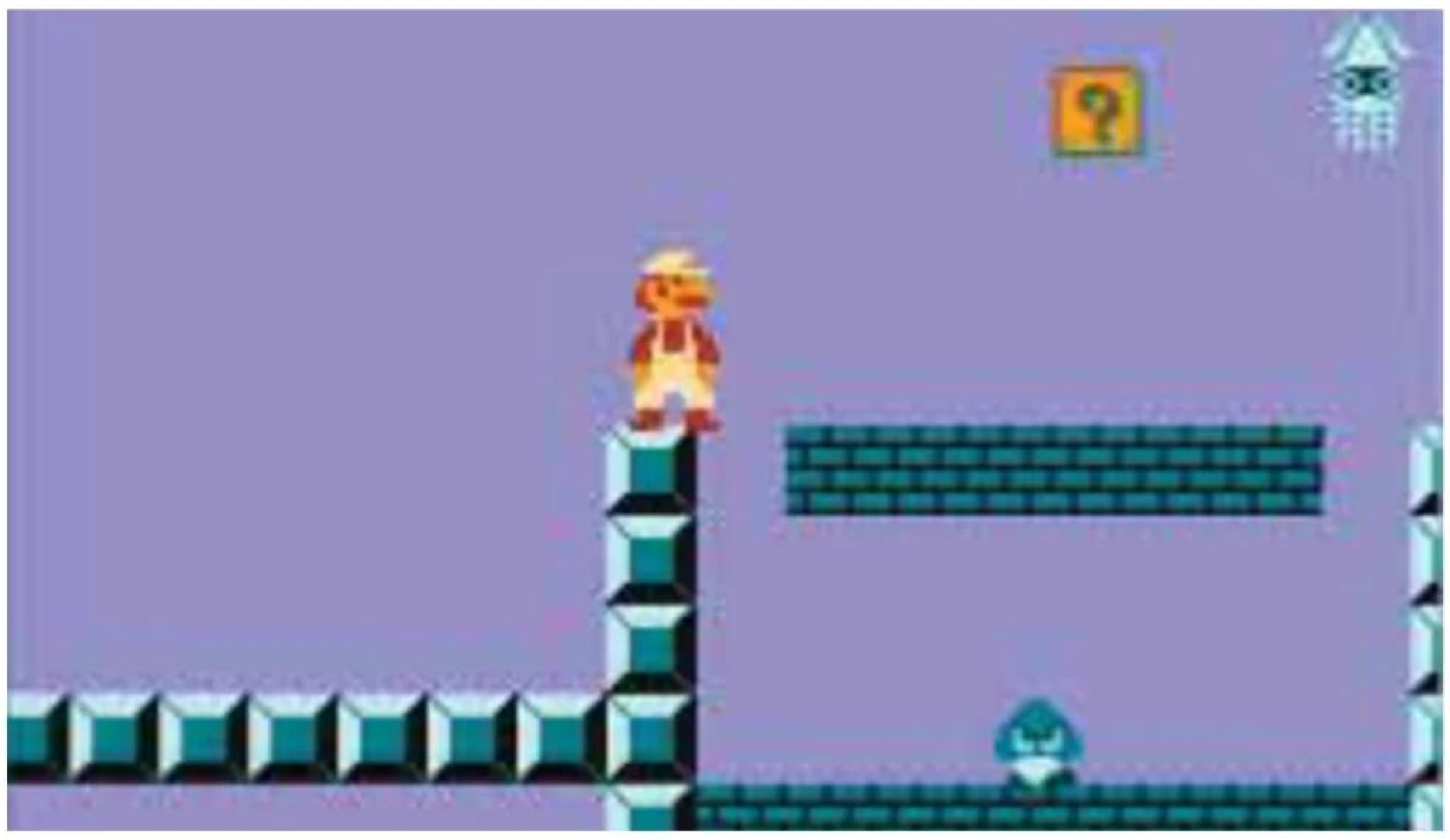
SUPER MUSHROOM

■ Replacing Mario with Toad, *Super Mushroom* sees power-ups replaced with enemies, new sound effects added for jumping and some reworked graphics and textures. The game is apparently at a '99.9%' difficulty level and is considered one of the hardest *SMB* hacks made.



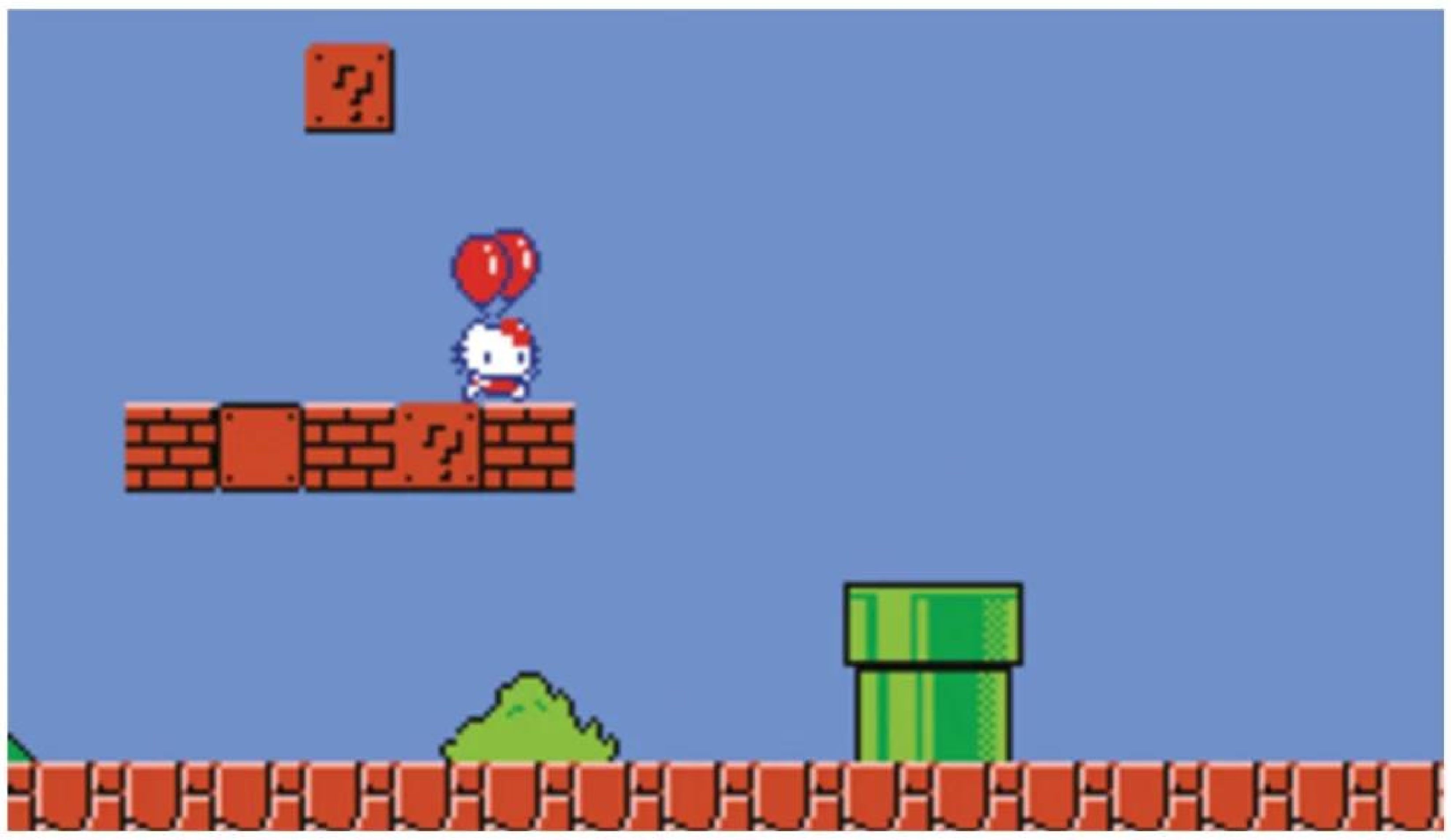
SUPREME ICE BROS

■ A hack that sees the fire power-up of Mario's replaced with an ice-based attack, *Supreme Ice Bros* also replaces Goombas with ninjas (who receive a speed boost), sees Bowser become the devil, hidden paths in pre-existing levels and completely remade music. It's stupidly hard, too.



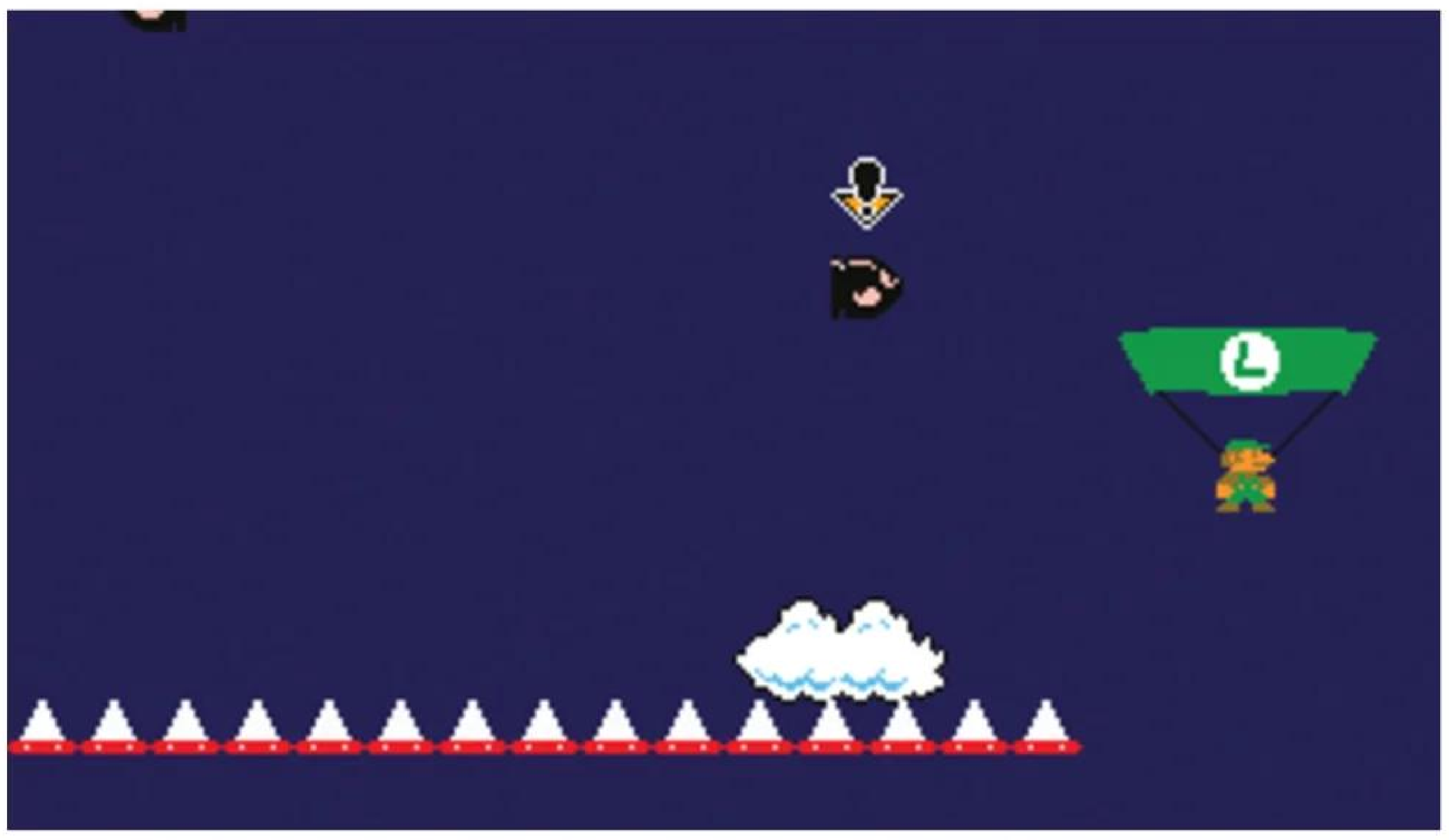
THE NEW STRANGE MARIO BROS

■ Intentionally glitchy and oddly designed levels are the trademark of The *New Strange Mario Bros*, a game that gets harder as it goes on. Infamous for incorporating new graphics that messed around with how the physics of the games worked, *The New Strange Mario Bros* really was the experience it promised.



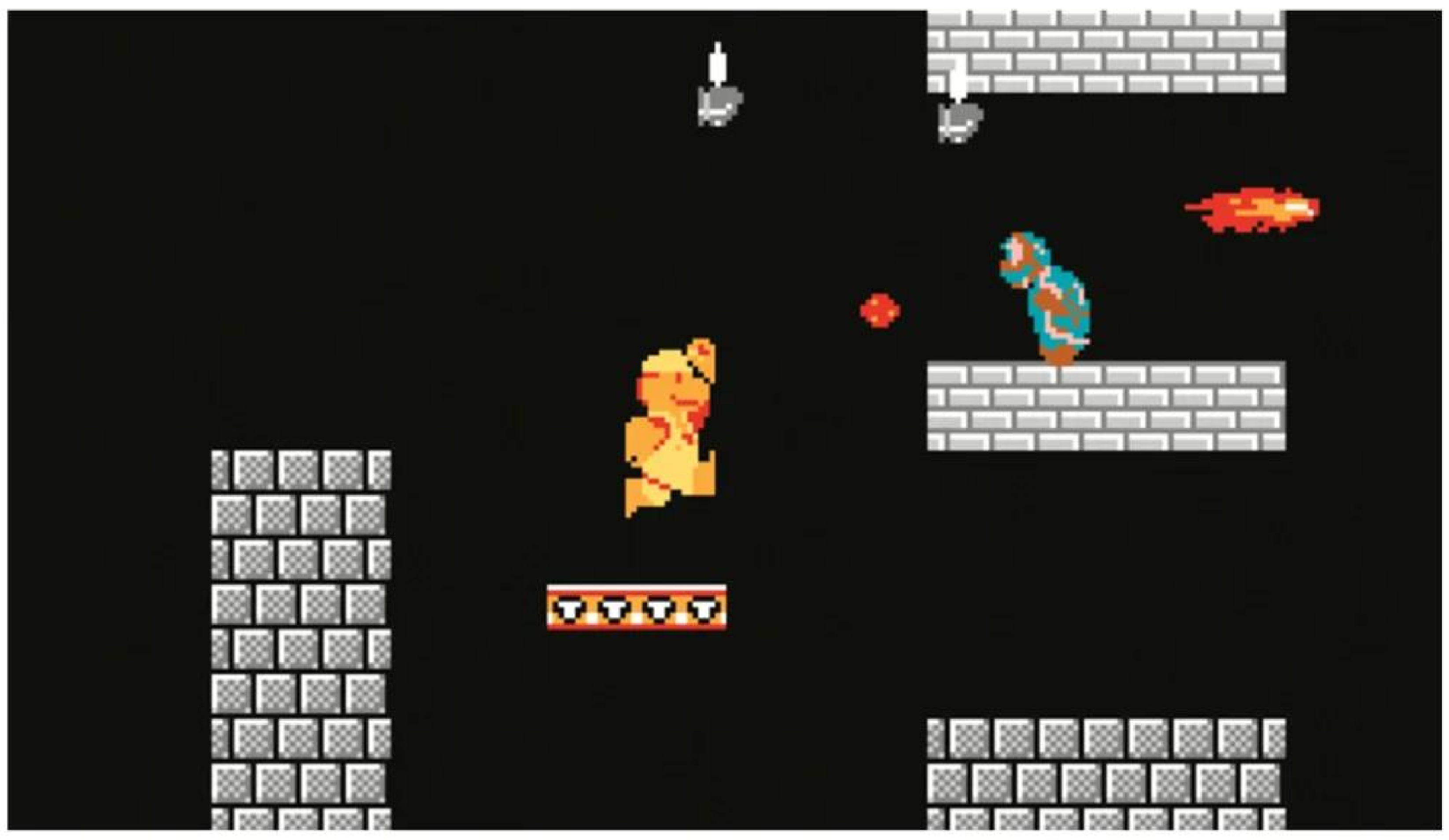
HELLO KITTY IN THE MUSHROOM KINGDOM

■ This bizarre hack takes the sprites from the Japanese NES game *Hello Kitty World* and uses them to replace the eponymous Bros of the original title. Even coming with its own story, the hack is the result of a lot of effort, and actually a surprisingly good game.



LUIGI'S FIRST QUEST: THE SEARCH FOR MARIO

■ Roles have been reversed, and it's Luigi's time to shine in this interesting hack that places the lankier, greener brother in the shoes of his stodgy younger brother. The hack includes a slew of new levels that take advantage of Luigi's higher jumping prowess.



JOE & MOE PIZZA DELIVERY

■ Probably riffing on the inherent stereotype-bashing inherent to Mario, *Joe & Moe* replaces the majority of the graphics in *Super Mario Bros* and replaces them with the creator's own take on the Mushroom Kingdom. The levels have been redesigned, too, but not to a particularly high standard.

> “As with other Nintendo games, it’s a piece of people’s childhoods. Anyone who grew up owning a NES remembers it fondly”
>
> Jerry Momoda

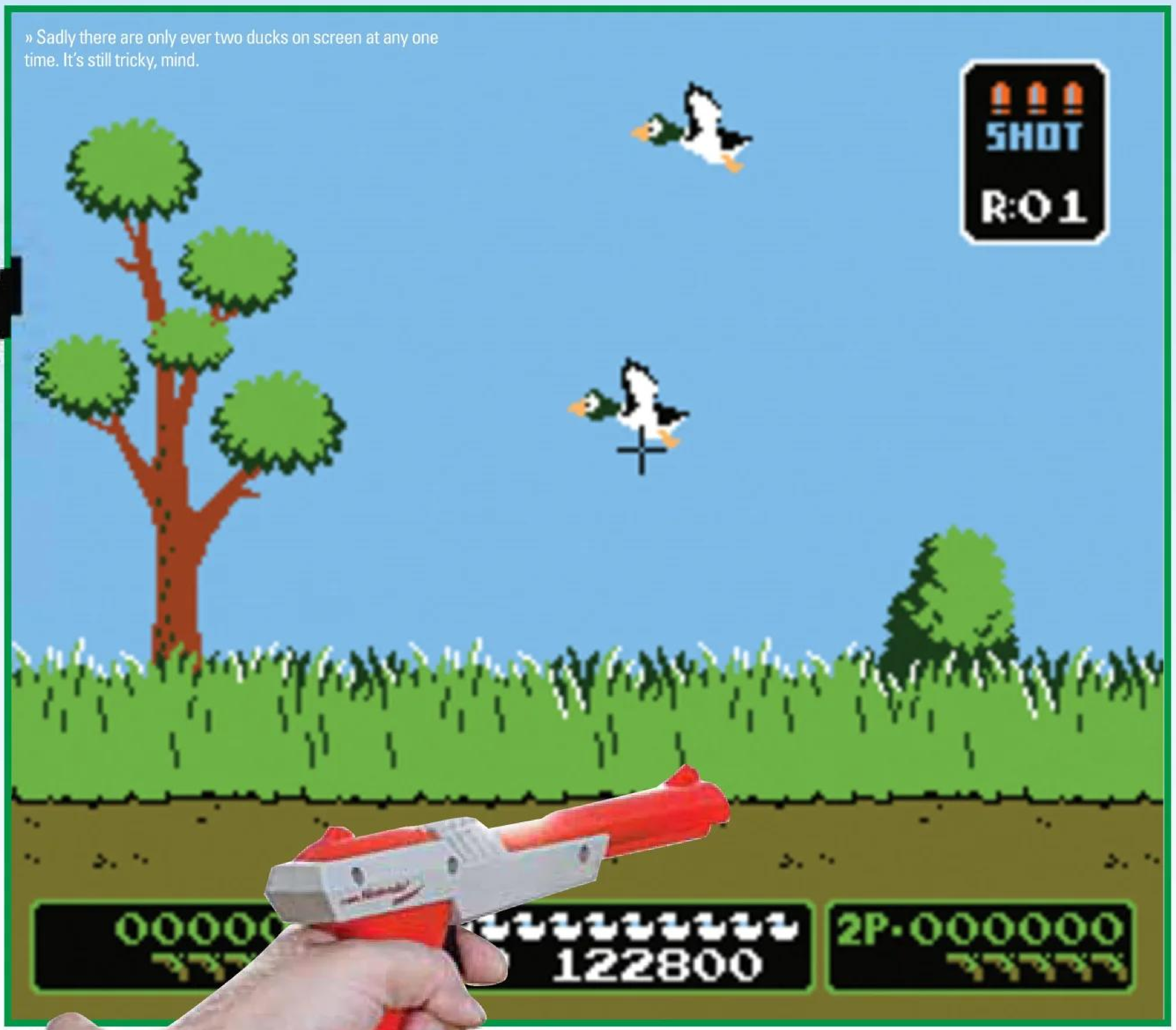
DUCK HUNT

Starring a smarmy dog and scores of hapless flying wildfowl, Duck Hunt was the game that introduced many to the joys of the NES Zapper lightgun. Mike Bevan looks back at the history and enduring appeal of Nintendo's virtual hunting trip

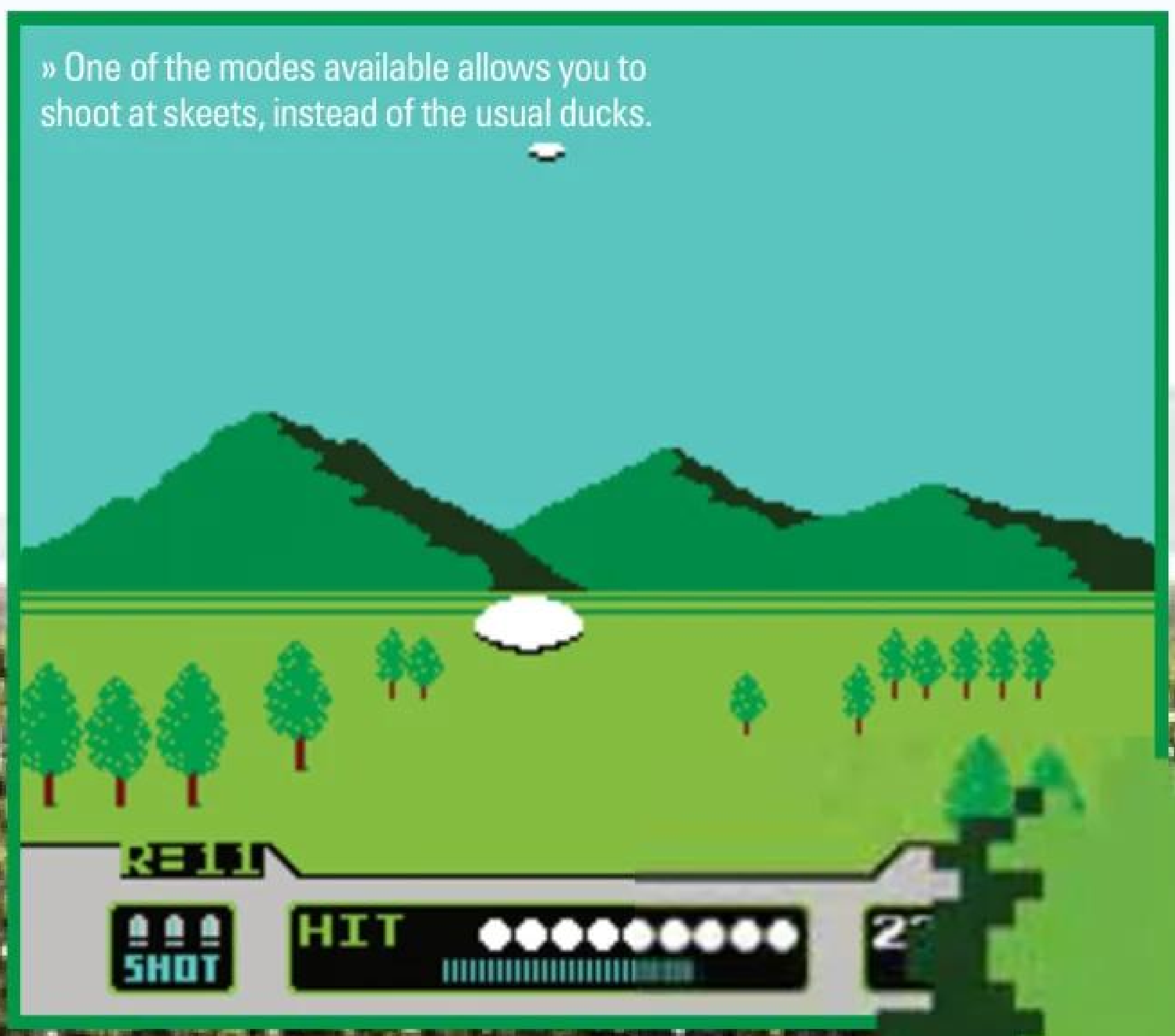
Most gamers of a certain age will have certainly played *Duck Hunt*, for one simple reason – it was paired on a pack-in cartridge for the Nintendo Entertainment System along with one of the most popular and groundbreaking console games of all time, *Super Mario Bros*. But while Shigeru Miyamoto's platform classic was undoubtedly the more attention-grabbing title of the compilation, *Duck Hunt* retains the endearing nostalgia of childhood, a cartoon shooting gallery with a sniggering canine companion and the hapless quacks of animated flapping ducks brought down by the simple act of pulling a plastic trigger. The grinning face of *Duck Hunt*'s lovable dog, fresh from rooting around in bushes for nesting gun-fodder, has become an ironic and humorous hallmark for videogaming disappointment after missing your quarry in Nintendo's lightgun shooter. And 30 years on, he's set to make a comeback in the latest instalment of the *Super Smash Bros* fighting game franchise with a feathered friend in tow. It seems all these years later, the ducks are striking back.

Although most people may know *Duck Hunt* from the *Super Mario Bros* compilation cart, it was in fact the debut pack-in title for the North American NES launch in 1985, when it came bundled with *Gyromite*, a platform game that worked with Nintendo's Johnny Five-alike robot R.O.B. Coupled with its later appearance as a pack-in for various NES bundles alongside *Super Mario Bros* and *World Class Track Meet*, that's an awful lot of copies of *Duck Hunt* out in the wild.

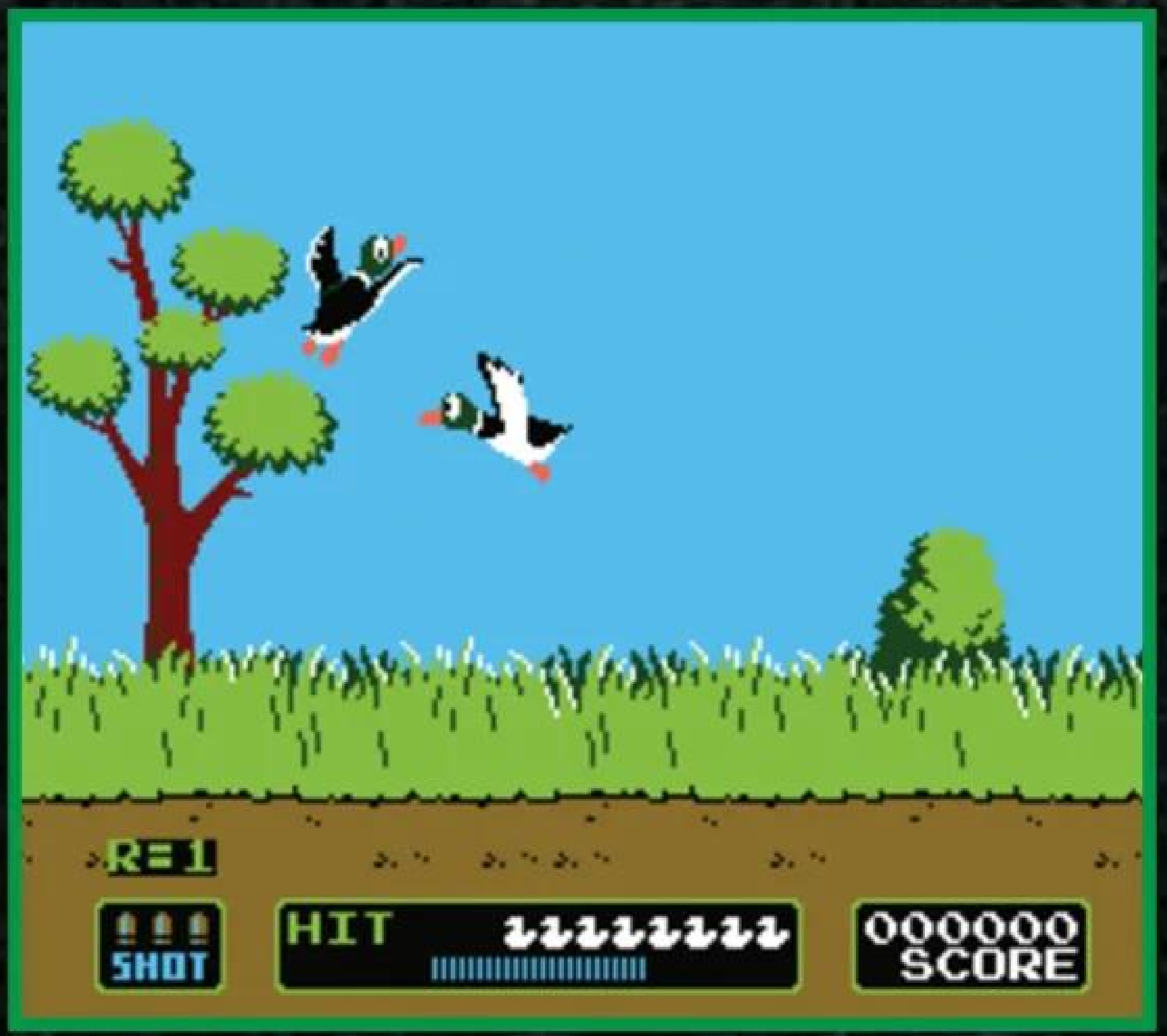
Produced by renowned Nintendo designer Gunpei Yokoi, creator of the Game & Watch and Game Boy handheld systems, *Duck Hunt* was in fact a digital reincarnation of his earlier electromechanical toy, a Kôsenjû ('light ray gun') game of the same name. Released in 1976, the product used a small mirror-projection device to project white duck silhouettes onto a wall. The ducks would 'fall', accompanied by a loud quack, ▶



» Sadly there are only ever two ducks on screen at any one time. It's still tricky, mind.



» One of the modes available allows you to shoot at skeets, instead of the usual ducks.



» Contrary to popular belief, there are actually three different coloured ducks in *Duck Hunt*.

▶ when the player hit them with the shotgun-shaped lightgun provided. In fact, despite the absence of a pastoral background or your ubiquitous hunting dog, the basic game mechanics were very similar to the future NES version. However, the relatively high retail price of 9,500 yen (around £75 adjusted for inflation) meant it was an expensive novelty back in Seventies Japan.

The version of *Duck Hunt* that most of us are familiar with was launched on the Japanese Famicom console in April, 1984. It was one of three initial titles for Nintendo's new Famicom Beam Gun peripheral, along with the Wild West-themed *Wild Gunman*, and the police-training style shooter *Hogan's Alley*. In North America a version of the game was released for Nintendo's VS arcade system the same year, prior to its home release in 1985. Former Nintendo market-research analyst Jerry Momoda remembers *Vs Duck Hunt* well. "VS System games were an inexpensive two-chip update [of existing Famicom titles] with new cabinet graphics," he says. "They were a welcome alternative for operators who had plenty of old cabinets. Operators could quickly change games on location with little downtime, and keep locations fresh with new titles. The VS

PERIPHERAL VISION

Other games featuring notable or peculiar hardware add-ons

GYROMITE NES

■ Aka *Robot Gyro*, it was designed for use with the Robotic Operating Buddy (R.O.B.) for NES. It's a two-player puzzle platform game, the second player using R.O.B. to move on-screen gates and pillars by manipulating a pair of gyroscopic spinning tops.

MARIO CLASH VIRTUAL BOY

■ Amazingly, there were no proper Mario games on Nintendo's failed console. What there was, however, was this fun effort that has Mario flinging shells at enemies on distant ledges while avoiding enemies and hazards found on his own platform.

YOSHI'S SAFARI SNES

■ One of the few fun times to be had with Nintendo's clunky Super Scope lightgun, it's an odd hybrid that sees you trundling along a highway blasting Bowser's minions, jumping obstacles and fighting ridiculous-looking bosses.

RESIDENT EVIL 4 VARIOUS

■ For its survival-horror masterpiece, Capcom released a bloody-looking chainsaw-style controller. The PS2 version even made little revving noises as you ran around decapitating zombies. Sadly, the shape of the controller was a bit awkward.

OUT RUN 3D MASTER SYSTEM

■ While *Space Harrier* deserves a mention, we're actually going to go with *Out Run 3D*. The animation is a little choppy at time, but the impressive visuals and new track designs certainly make up for it. Highly recommended.

FAITHFUL HOUNDS

More videogames featuring doggy heroes

STAR PAWS

VARIOUS

■ Based on an abandoned concept that was dreamt up by *Manic Miner* creator Matthew Smith, *Star Paws* resembled a sort of *Road Runner* in space. As Captain Roger Pawstrong it was your job to capture delicious but fiendishly wary Space Griffins and dispatch them to Earth. The C64 version featured a great soundtrack by composer Rob Hubbard.

SLEEPWALKER

AMIGA

■ Released in aid of the BBC's Comic Relief charity, this game saw players controlling Ralph the dog and protecting his sleepwalking master. Ralph had to neutralise various hazards in his owner's path as he careered ever-onwards, taking care not to wake him up. It also featured small cameos from comedians Lenny Henry and Harry Enfield.

SAM & MAX HIT THE ROAD

PC DOS

■ This was the first outing for Steve Purcell's unlikely detective duo – a six-foot fedora-wearing dog and a hyperkinetic 'rabbity-thing'. It's an all-American road trip involving robot scientists, a frozen Bigfoot and the world's biggest ball of twine, and formed the basis for Telltale Games' modern episodic series of adventures.

PARAPPA THE RAPPER

PLAYSTATION

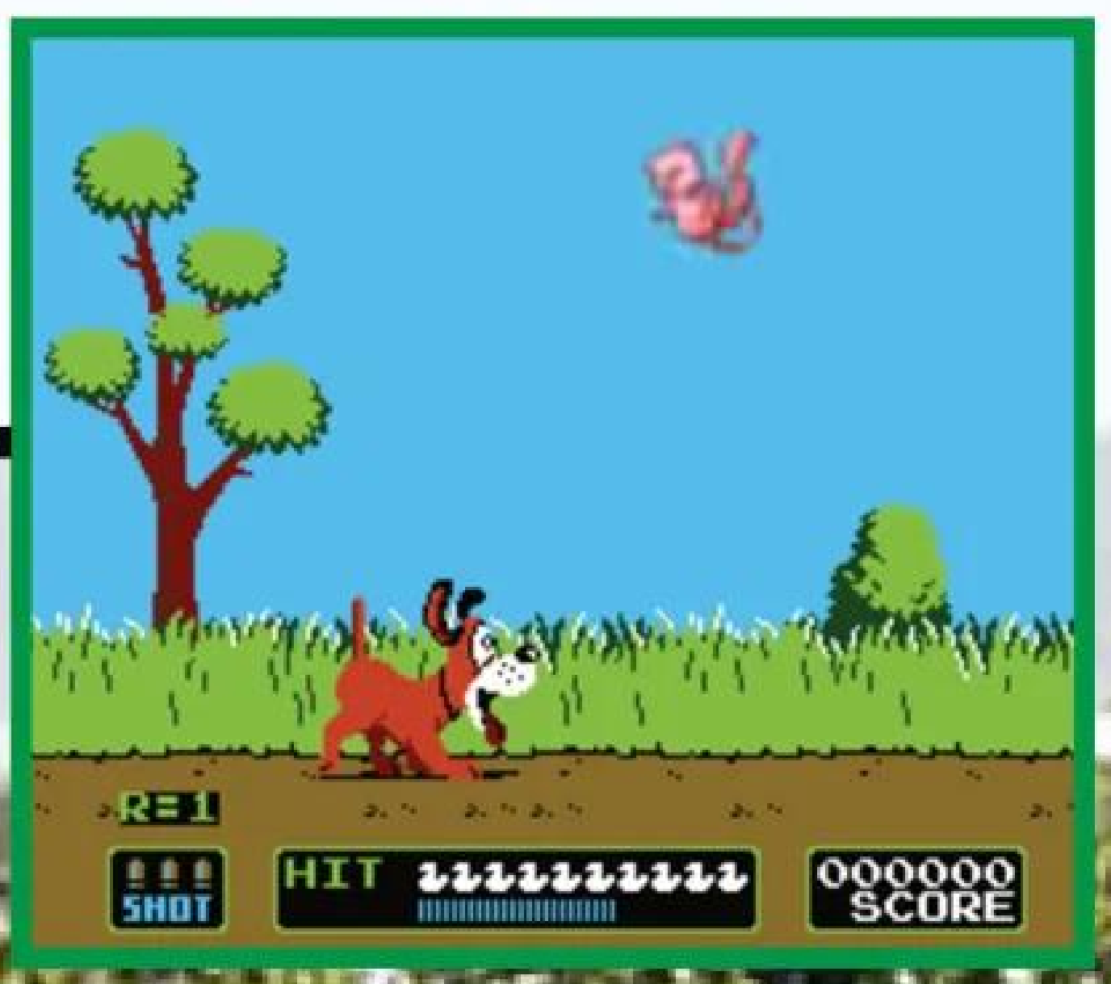
■ Wonderfully quirky and unmistakably Japanese, *Parappa* introduced us to the peculiar tale of a funky paper-thin canine, his sunflower girlfriend, and a karate-practising onion, among other things. A precursor to the many popular rhythm-based games that followed, it also spawned a guitar-focused sequel *UmJammer Lammy*.

OKAMI

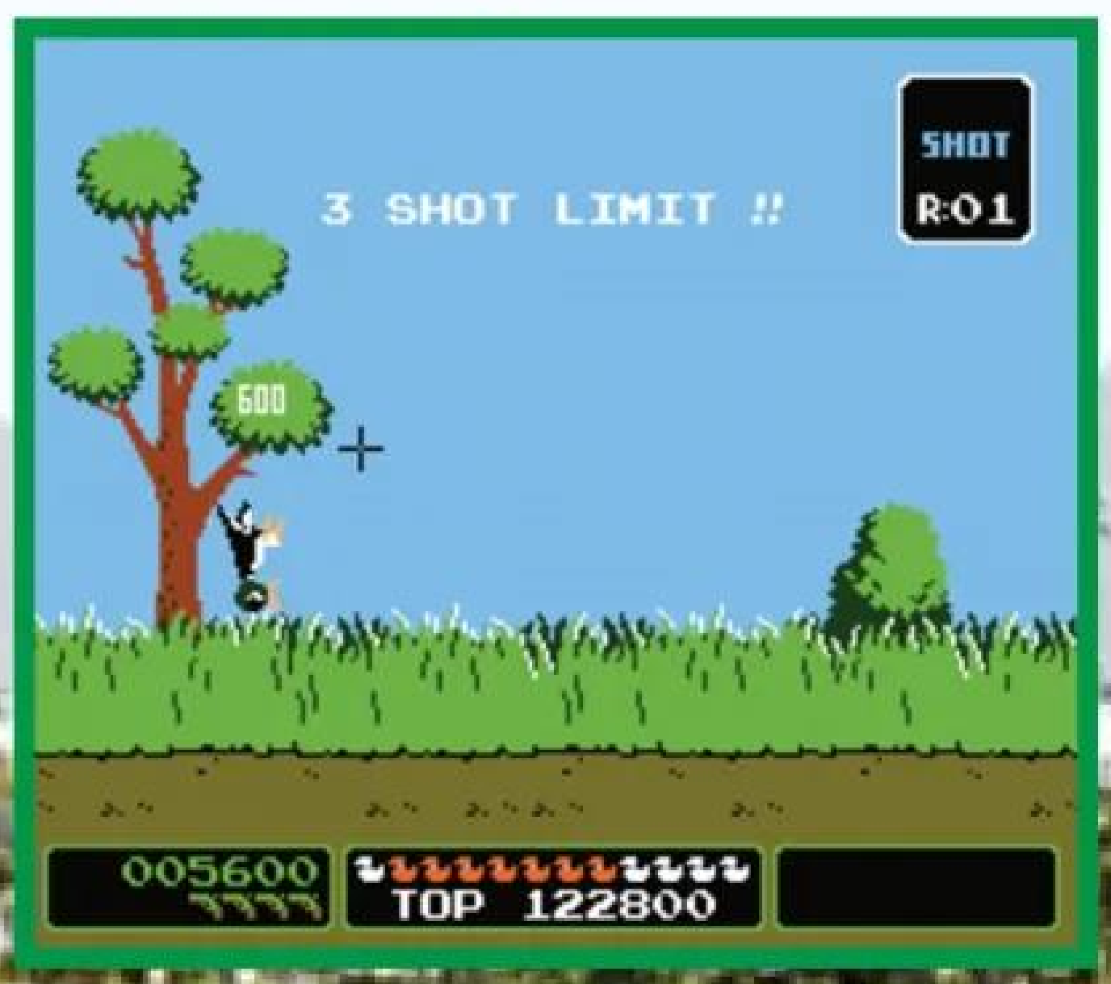
VARIOUS

■ *Okami* puts you into the paws of a snow-white wolf called Amaterasu, tasked with exploring a watercolour-like medieval Japan. You'll need to master the game's innovative 'brush stroke' techniques to solve puzzles and strike down enemies, while colouring in the beautifully dreamlike game world resembling a children's drawing book.

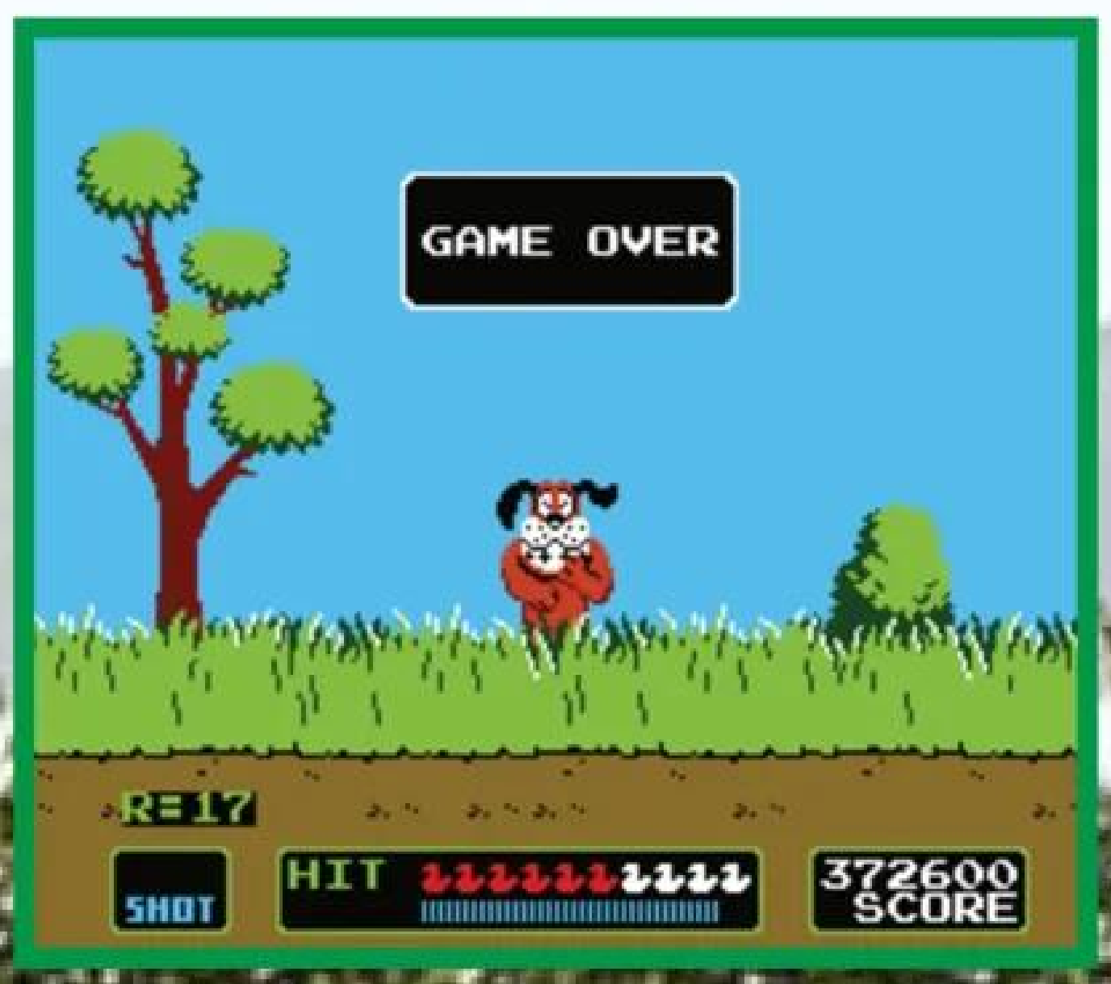
» Each level starts with your faithful hound sniffing out ducks, before leaping into action.



» *Duck Hunt* is effectively a remake of one of Gunpei Yokoi's earlier games.



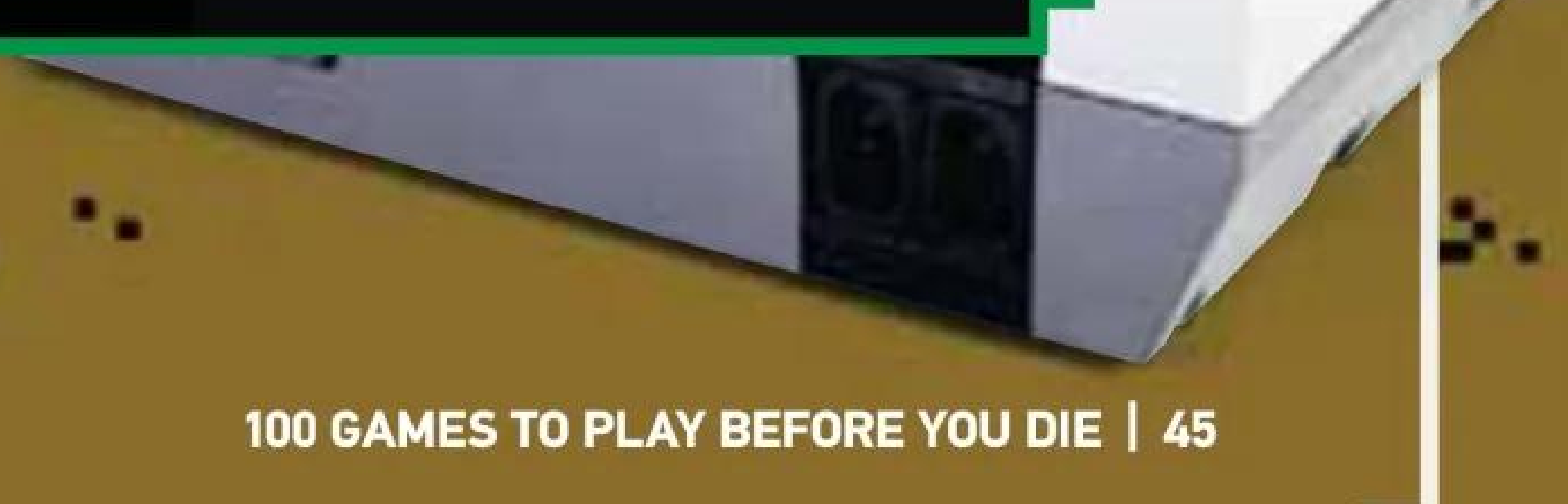
» The dog's name is rumoured to be Mr Peepers, but we've found no hard proof of this.

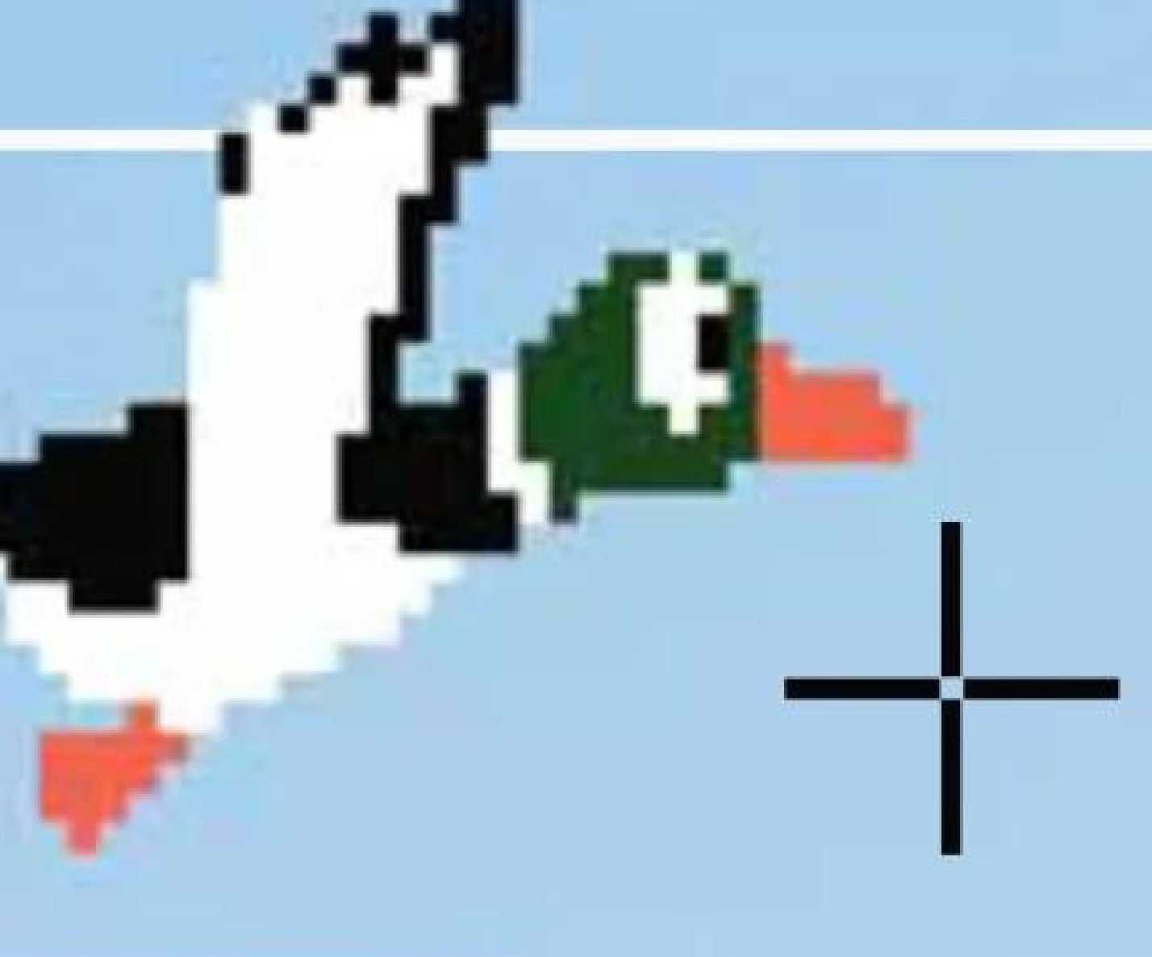


> "The first [arcade gun] version was black and looked like a .357 Magnum, so much that it was too realistic for American street locations"

System and PlayChoice were very successful and Nintendo's last official coin-op games. Our guns were imported from Japan. The first version was black in colour and looked like a .357 Magnum, so much that it was too realistic for American street locations and could be mistaken for a real gun. They were made of pliable rubber over a metal core, and as such didn't last long in American arcades…"

While the arcade version of *Duck Hunt* was for the most part very similar to the console release, there were a couple of notable differences. The cabinet was set up with a couple of lightguns with players taking turns to play, and the game alternated between duck and skeet shooting rounds. And, as perhaps could be deduced from the cabinet marquee, which depicted *Duck Hunt* dog cowering from a hail of bullets, it was possible to shoot more than just the ducks. There was an added bonus round in which our canine pal popped up among the feathered targets and could be blasted by 'mistake', a misdemeanour for which he'd rightfully scold you at the end of the segment. To the future disappointment of many a NES *Duck Hunt* player that longed to zap that annoying grin off the mickey-taking hound, this little Easter Egg was unfortunately nowhere to be seen in the console version. While





JERRY MOMODA

At Nintendo of America in the Eighties, Jerry helped to test and promote new arcade and console products

What's your personal history with the console and arcade versions of *Duck Hunt*?
I was hired by Nintendo in 1982, and was fortunate to be the one to communicate with Japan on games in development. No one wanted to touch the console industry in America after the crash of 1983. The VS [Arcade] System served as a bridge leading up to the North American NES release in 1985. Both *Duck Hunt* and *Hogan's Alley* were first released for the coin-op VS System in 1984. The VS System was simply a coin-operated version of the Japanese Famicom console.

Was the arcade version of *Duck Hunt* as popular as the home version?
It was designed to be a Famicom/NES title, from the simplicity of gameplay and the graphics. *Duck Hunt* was bundled along with *Super Mario Bros* in some configurations of the NES console, so it reached way more players. It's a better fit for the console player base. *Duck Hunt* and *Hogan's Alley* both had instant but not long-lasting appeal in arcades.

And in the arcade version you could actually shoot that pesky dog?!
Everyone wanted to shoot [it] because it mocked players. And so it played an antagonist role as it taunted players by laughing at them. For obvious reasons, being able to shoot the dog was removed from the NES version. This was designed to be good, clean, family fun – a Nintendo trademark. In *Hogan's Alley*, shooting people (though animated) probably affected its marketability.

How important do you think the cartoon-like graphics were in drawing people in?
In the home market I think it had a lot of appeal. For the players it targeted, cartoon-like graphics had a strong appeal. The warm, vibrant colours used in *Duck Hunt* gave it a whole different feel than games like *Hogan's Alley*. Naturally, parents don't mind as much if little Johnny is going cartoon duck hunting versus shooting at humans in a realistic war, zombie, crime or space game.

Why do you think *Duck Hunt* is still so fondly remembered today?
As with other Nintendo games, it's a piece of people's childhood. Anyone who grew up owning a NES remembers this game fondly. Being a pack-in, nearly everybody owned the game. It's a conversation piece that people can share. The same way they talk about *Super Mario Bros*…

TWEETY BIRDS

Ten more videogames starring various feathered friends

PHOENIX

ARCADE

■ For some reason several early arcade shoot-'em-ups had you shooting at flocks of kamikaze birds in space, notably Nintendo's *Space Firebird* and this offering from Centuri/Taito. Though highly derivative of *Galaxian*, it had a certain charm, especially the stage with eggs hatching into larger winged baddies, and the final mothership which players had to chip away piece by piece in order to destroy the core.

PENGO

ARCADE

■ If you like the idea of squashing cute blobby monsters with ice blocks, accompanied by a rendition of synth instrumental classic 'Popcorn', then *Pengo* is the game for you. The aim is to defeat Pengo's arch-enemies, the Sno-Bees, by flattening them with the movable parts of the maze. Your diminutive penguin can also stun enemies by wobbling the side of the screen, or win by pushing three 'diamond' blocks together.

JOUST

ARCADE

■ *Joust*'s unique concept of making simple physics your weaponry made it stand out in Eighties arcades, plus the fact that it was one of the first co-operative two-player games. As a pair of knights mounted on an ostrich and a stork, it was a matter of hammering the flap button to gain altitude then using gravity to come down on top of enemies mounted on buzzards, knocking them from their steeds.

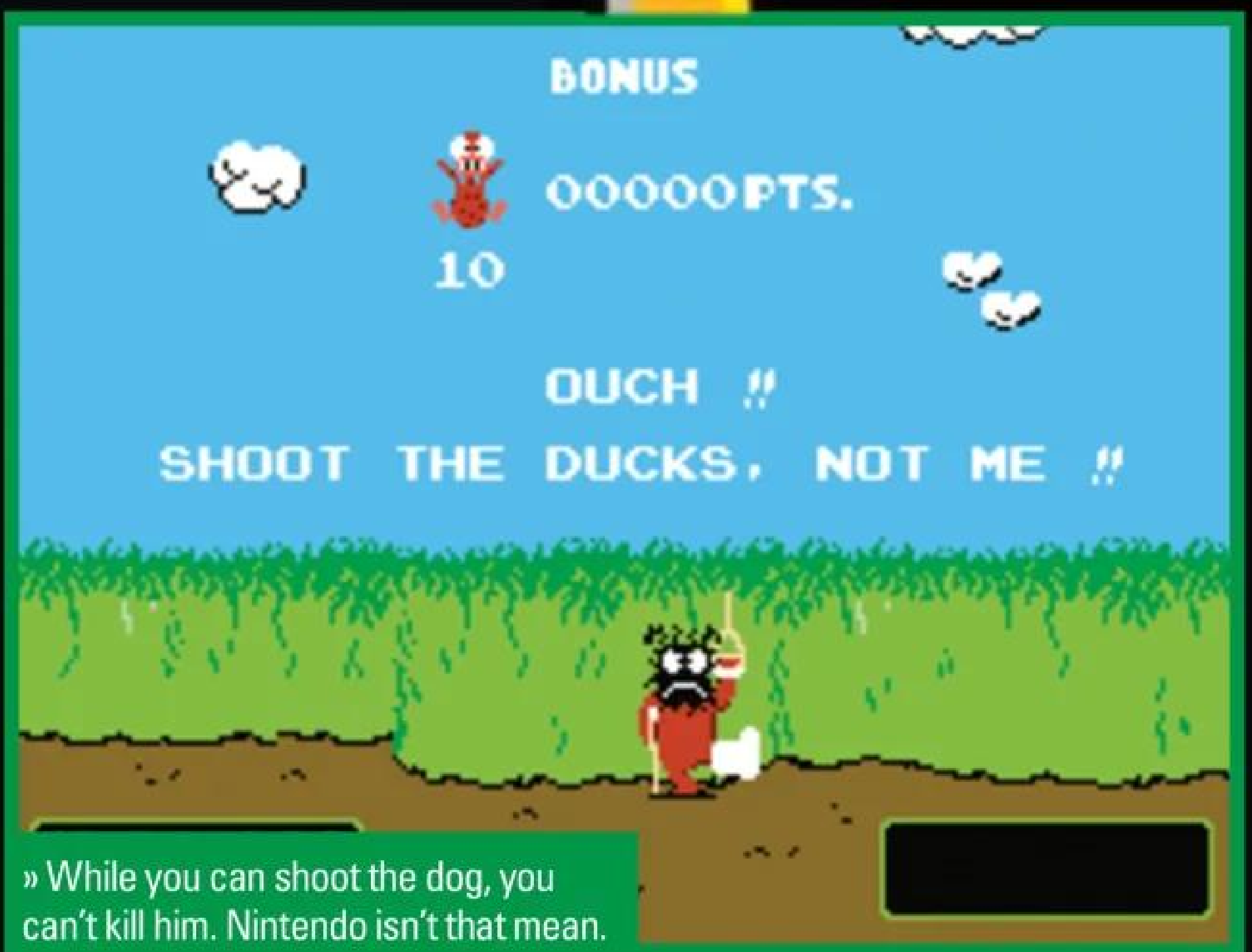
FLICKY

ARCADE

■ This attractive arcade game was designed by Yoji Ishii, who later went on to create the colourful shoot-'em-up *Fantasy Zone*. The game sports a great degree of character, particularly in the form of Flicky himself, a cute blue bird tasked with rescuing a number of yellow chicks from the clutches of some mean pussycats. The way they follow you around in a little line across the scrolling stages is simply adorable.

▶ Nintendo was happy enough to let as shoot at defensive poultry, discharging virtual slugs at the family pet was it seems a step too far for domestic duck-hunters.

For the Western release of the NES lightgun, the famous Zapper, the Dirty Harry-style Japanese Beam Gun was remodelled as a futuristic, and somewhat less realistic virtual weapon. Inside the Zapper was a simple sensor which responded to changes in luminosity on the screen. In *Duck Hunt* and other Nintendo Zapper titles, pulling the trigger caused the screen to black out and display white boxes around the targets, just for a fraction of a second. The Zapper detected this change in intensity of light along with whether you were near enough centred on the boxes to score a hit on a duck. And that's why when you played *Duck Hunt* you'd occasionally sense the odd flickering effect, although it wasn't annoying enough to spoil the fun. The way the Zapper worked also meant that pointing it at a light-bulb wouldn't do you any good if you wanted to cheat, although sticking it right up near the screen might have helped, if kind of defying the point of the game. The timing issues of the Zapper hardware unfortunately means that *Duck Hunt* won't work on modern LCD TVs.



BONUS

00000PTS.

10

OUCH !!

SHOOT THE DUCKS, NOT ME !!

» While you can shoot the dog, you can't kill him. Nintendo isn't that mean.

CHICKIN CHASE

COMMODORE 64

■ In this curious Firebird budget title you play a lone rooster in a henhouse. It's down to you to make sure the inmates are laying plenty of eggs by, erm, fertilising lady chickens, while fending off pesky foxes, weasels and snakes. Mess up and the farmer's wife will come chasing after you with a rolling pin and dispatch you to the cooking pot. Ouch. We bet Foghorn Leghorn never had to deal with this sort of thing.

ANGRY BIRDS

VARIOUS

■ Who'd have thought that a game involving catapulting rotund wildfowl at pigs in towers would take over the world? With over two billion downloads across multiple platforms to date, *Angry Birds* is the most successful mobile gaming app franchise ever created, and the biggest thing to come out of Finland since Nokia phones. We're still not sure what those poor piggies did to make those birds so mad, though.

THE LEGEND OF ZELDA: A LINK TO THE PAST

SNES

■ Anyone who's played a *Zelda* game will no doubt have tried to wallop the domestic chickens (or 'Cuccos') that populate the land of Hyrule at some point. However, *A Link to the Past* introduced an amusing feature where persistent hen-botherers were mobbed by an angry flock of killer poultry, meeting an undignified end beneath dozens of pointy beaks.

THE NEW ZEALAND STORY

ARCADE

■ Taito's cute platform game follows the adventures of Tiki the oddly yellow Kiwi, whose girlfriend and kiwi chums have been kidnapped by leopard seal Wally. Armed with a bow and arrow, he sets off to free them, negotiating balloon rides, spiked mazes, whales and punk teddy-bears on his way. A NES version, programmed by Software Creations, was released by Ocean.

ROAD RUNNER

ARCADE

■ Meep meep! Everyone's favourite cartoon bird made his arcade debut in Atari's take on the famous Looney Tunes shorts. Players take control of the Road Runner (Accelleratii Incredibus) as he zooms through the desert evading Wile E Coyote (Carnivorous Vulgaris) and his various backfiring Acme inventions. Along the way he has to negotiate traffic and scoff plenty of bird seed to avoid becoming dinner.

FINAL FANTASY VII

PLAYSTATION

■ First popping up in *Final Fantasy II*, the Chocobo has since become one of the mascots of Square's flagship RPG series. In *FFVII* they take on the appearance of a cross between an ostrich and Woodstock from the Peanuts cartoon strip, and can be bred, raced and ridden across the game world. You can even get hold of a summon spell that drops an enormous fat Chocobo on top of your enemies…

Duck Hunt comes with three different modes – game A gives you three bullets per duck to shoot at ten targets that rise consecutively from the thicket, the trickier game B gives you the same number of bullets to tackle two ducks flying up at a time, while game C substitutes clay pigeons for wildfowl. Game A also gives you an option for a second player to control the flight path of the ducks in a bid to put off player one, which can lead to a few hearty chuckles. Each mode continues at an increasing difficulty level until players reach round 99, when the game resets to a bugged round 0, featuring spectral ducks that are impossible to hit, echoing *Pac-Man*'s famous 'kill screen'. Another interesting fact about *Duck Hunt* is that its character designer (and the artist behind that famous doggy), Hiroji Kiyotake, went on to create Samus Aran of *Metroid* fame.

And in the latest instalment of *Super Smash Bros*, the snickering mutt is back on Nintendo's latest console, after being on the videogame 'bench' for 30 years. He comes complete with a duck on his back, and special moves that pay homage to other Zapper games including *Wild Gunman* and *Hogan's Alley*. You might not have been able to hit him with your Zapper back in the day on the NES, but now at least you might be able to slap him about a little bit. ✱

ULTIMATE GUIDE:

The Legend Of Zelda

Ashley Day argues that Nintendo's seminal adventure game isn't just an important piece of history but a game that's still great to play today. Discover one of Nintendo's greatest adventures

You really have to hand it to Miyamoto and his band at Nintendo. To make one of the greatest and most important videogames of all time, in the shape of *Super Mario Bros*, was one thing. But to repeat the same trick just a year later, and in a completely different style of genre, is rather incredible.

In fact, there isn't even a year between *Super Mario Bros* and *The Legend Of Zelda*. There was only five months between the Japanese release dates of each game, yet the latter represents a giant stride from the former in terms of game design. Where *Mario* was brilliantly simple, placing you at the start of a linear journey and merely asking you to move a little plumber to the right, *Zelda* offered a world of possibility by comparison.

Starting off in the middle of the vast land of Hyrule, it put you in control of a left-handed elf-like boy named Link, with three possible exits standing before him, and then… did nothing. No instructions, no dialogue, no hints. Just the promise of adventure and an invitation into the unknown. Which way should you go? Well that was entirely up to you, and that was the entire point of the game. There was an ultimate goal, of course – to collect the eight scattered pieces of the Triforce of Wisdom in order to defeat the evil Ganon and rescue the eponymous Princess Zelda – but it was the open nature of how you approached this task that really made *The Legend Of Zelda* so compelling.

It's a well-known story that Miyamoto's inspiration for *Zelda* came from his childhood memories of exploring the Japanese countryside without a map and the pleasure that he got from discovering places he had no previous knowledge of. The goal of the *Zelda* project was to capture that childlike fascination with the unknown, the sense of wonder that the world can provoke when everything around you is so new and unusual. And that project also happened to fortuitously coincide with the development of the Famicom Disk System, Nintendo's Famicom add-on that side-stepped the rising cost of ROM chips and allowed developers to create much bigger games than before.

The Disk System's rewritable media also allowed for game progress to be permanently saved without the need for cumbersome passwords, and this was a crucial technological advantage that allowed Nintendo to further distinguish its console games from those of the arcades. Coin-operated arcade games were still the dominant form of videogaming in 1986 and were focused very much on short-term challenge, cyclical and repetitive gameplay, and the thrill of chasing a high score. But Nintendo wanted its games to be something different; something you played over a long period of time, returning to like a good book to enjoy an ever-evolving experience; a journey, rather than the same few seconds over and over again.

This is very much how the modern videogame can be described 25 years ▶

Instant Expert

The Legend Of Zelda is the most non-linear adventure in the series. You can tackle the dungeons in almost any order you like, and the game can be finished without ever collecting the sword.

The Legend Of Zelda was the first NES title to sell over a million copies and went on to sell 6.5 million in total.

Though the map for *Zelda*'s third dungeon resembles a Nazi swastika, it is actually the much more innocuous manji, an ancient religious symbol used by Japanese Buddhists, which is the reverse of the infamous emblem and is common in Eastern philosophy.

Link is an unusual hero in that, in the first game and canonically throughout the series, he is left-handed. Perhaps by coincidence, the word 'links' is German for 'left'.

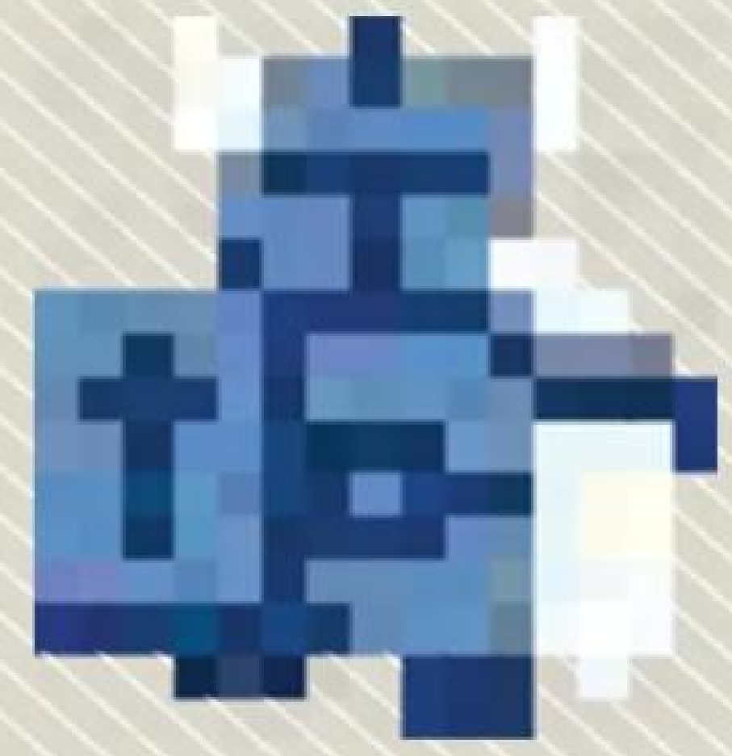
Complete *The Legend Of Zelda* and you can play a second quest with different dungeon layouts and item placements. If you want to skip straight to it, enter your name as 'ZELDA' at the start.

Princess Zelda is named after Zelda Fitzgerald, wife of novelist Francis Scott Fitzgerald.

When *Zelda* arrived in the US and Europe it was ported from disk to cartridge and became the first console game to include a battery to store save data.

Pixel Perfect

Some of Zelda's familiar characters make their debuts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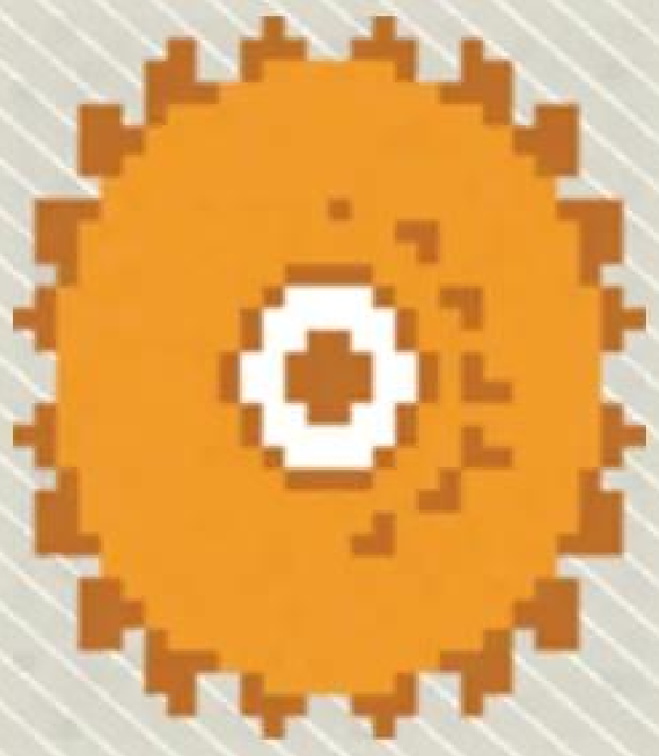
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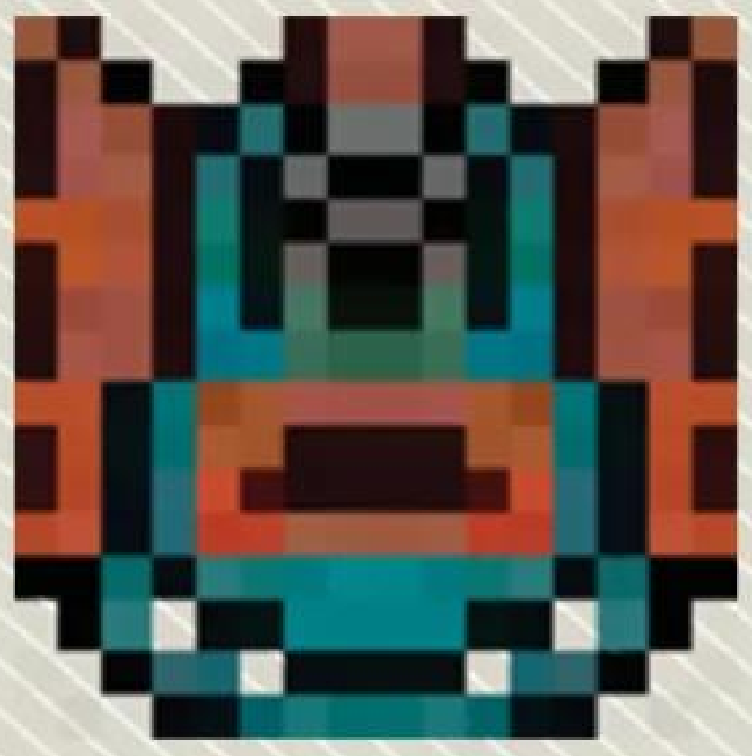
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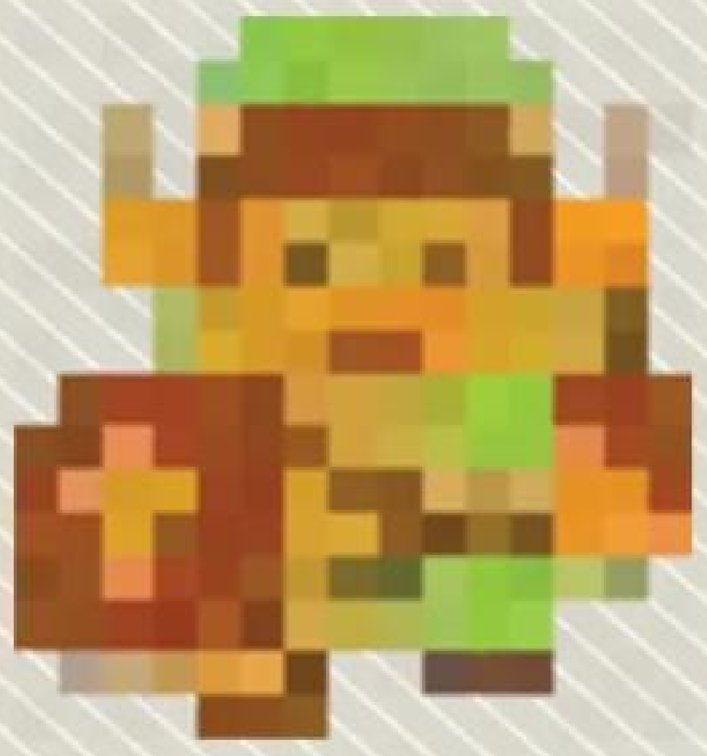
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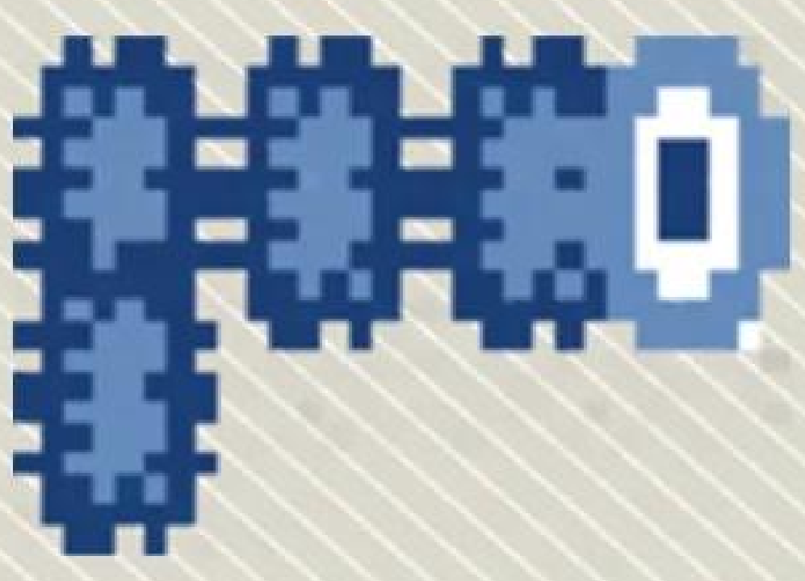
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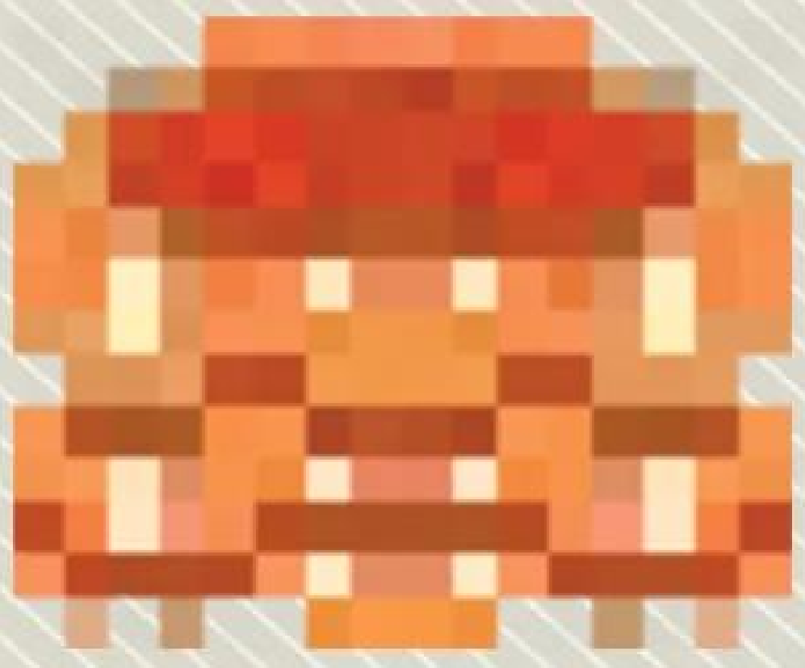
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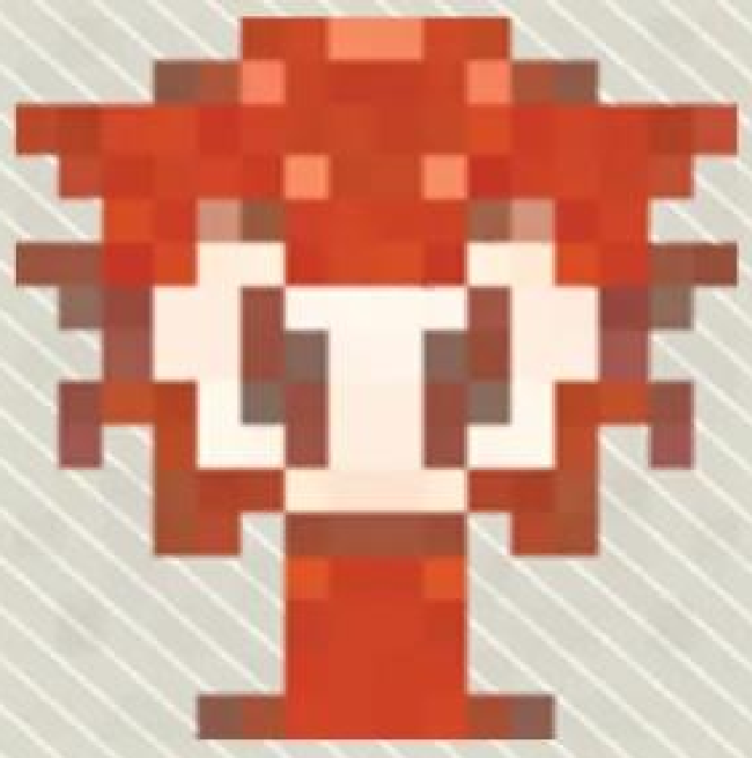
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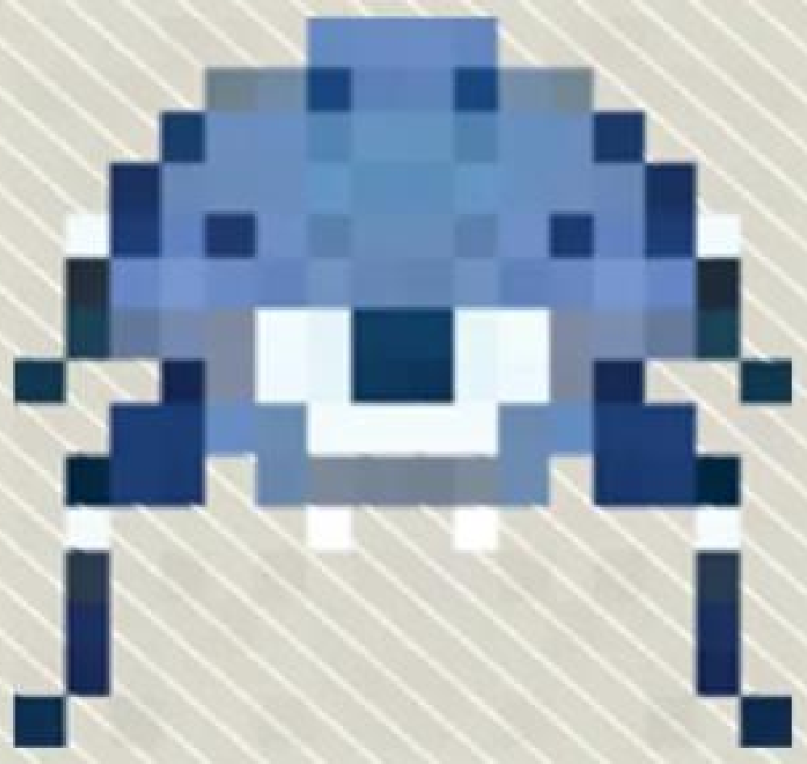
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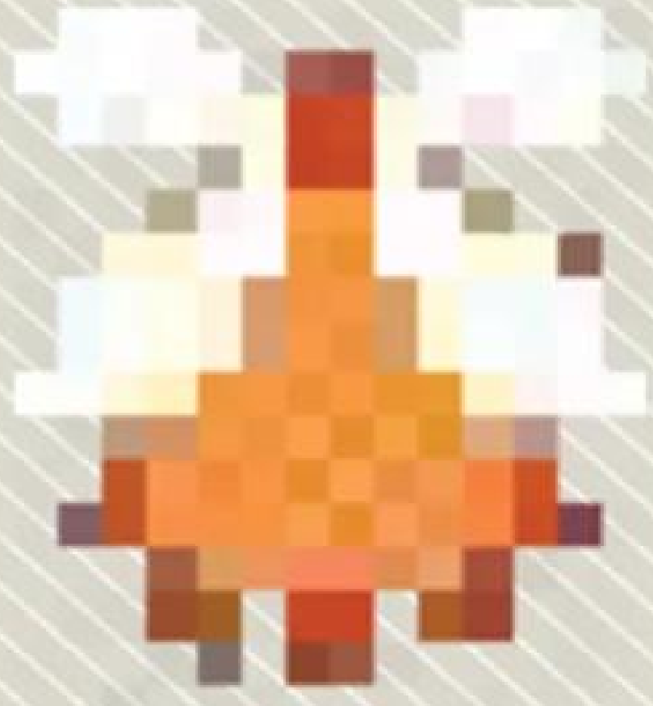
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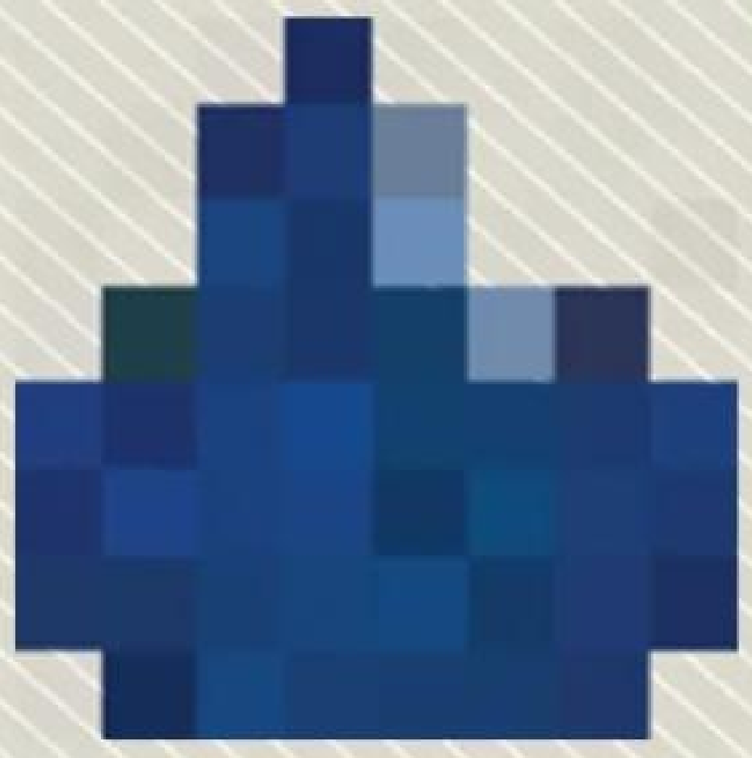
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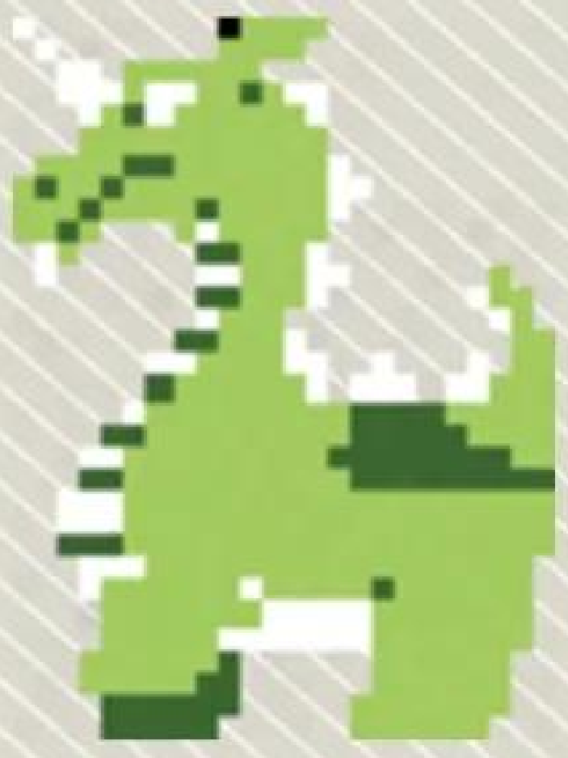
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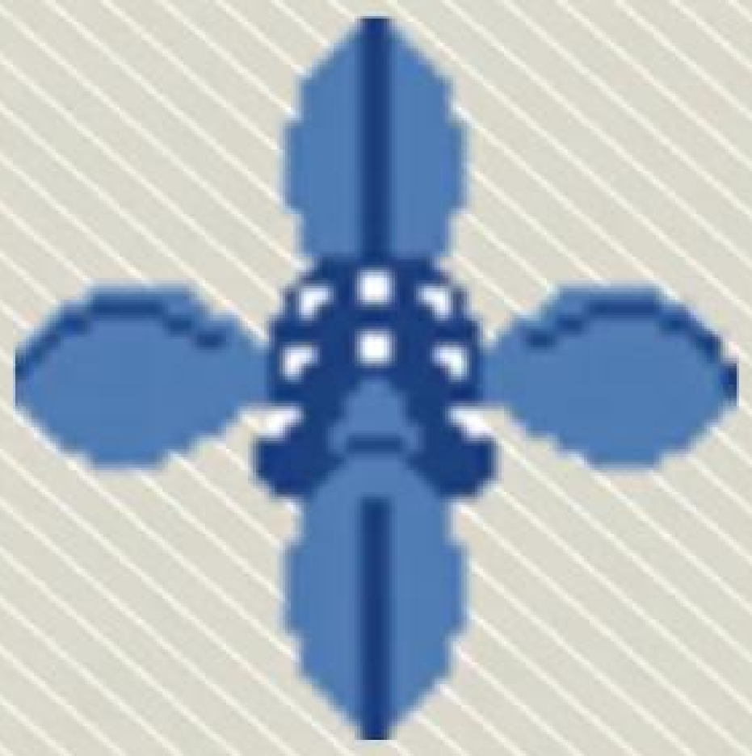
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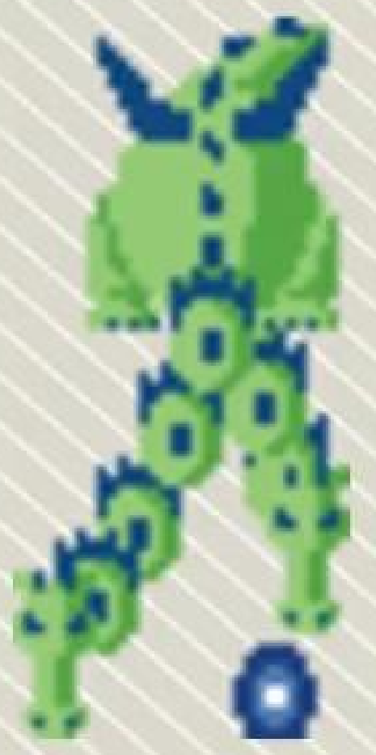
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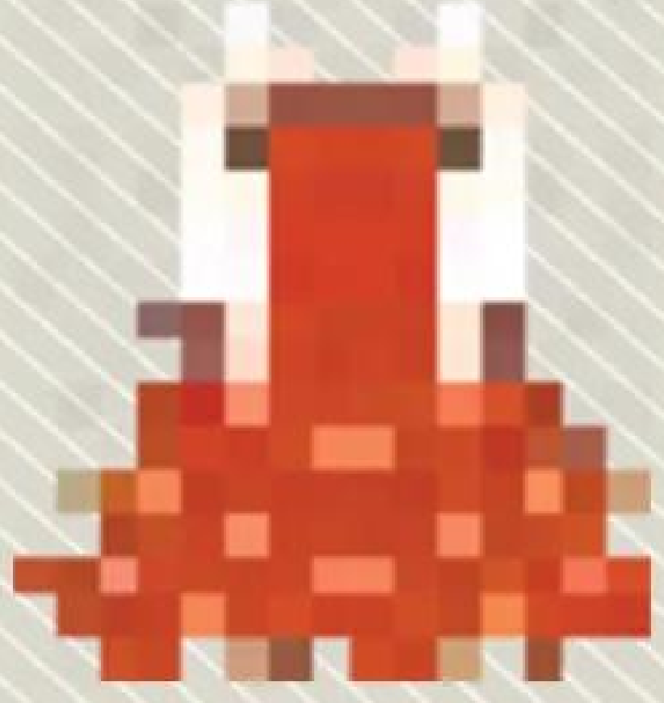
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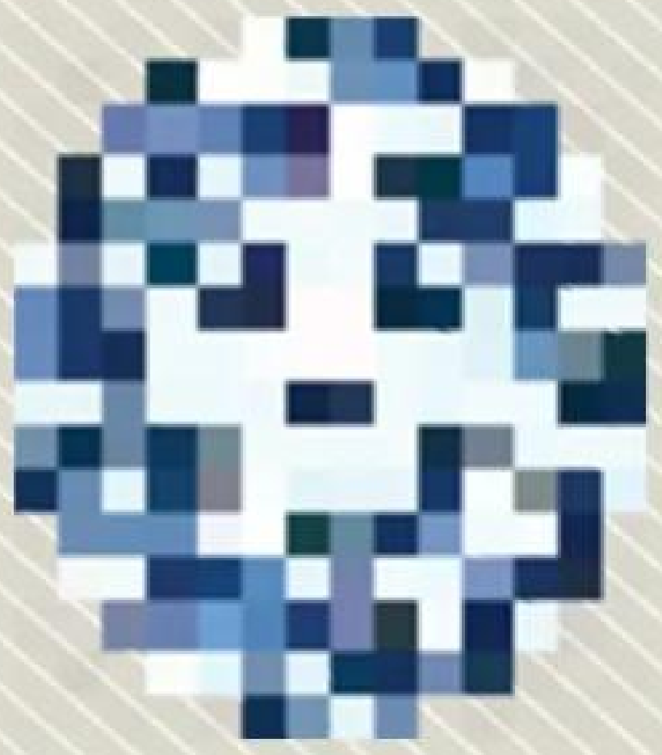
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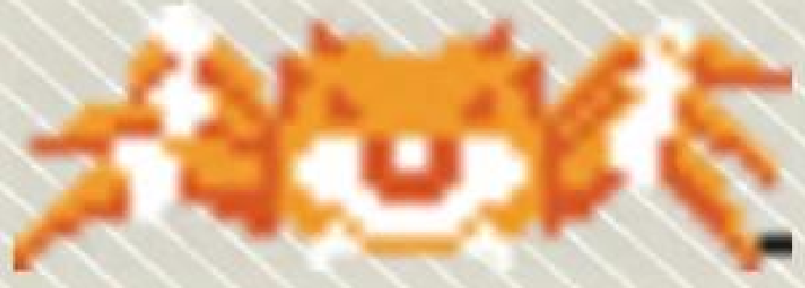
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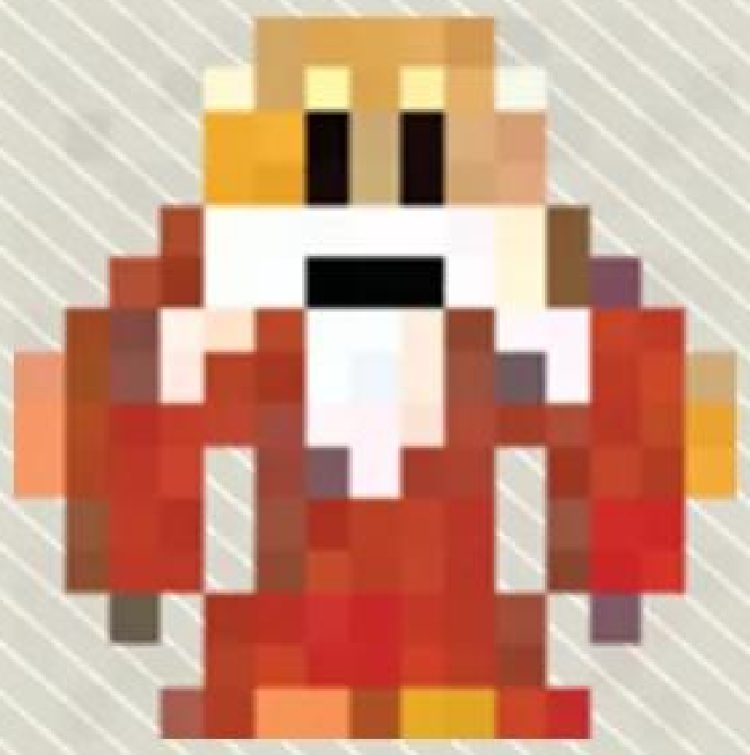
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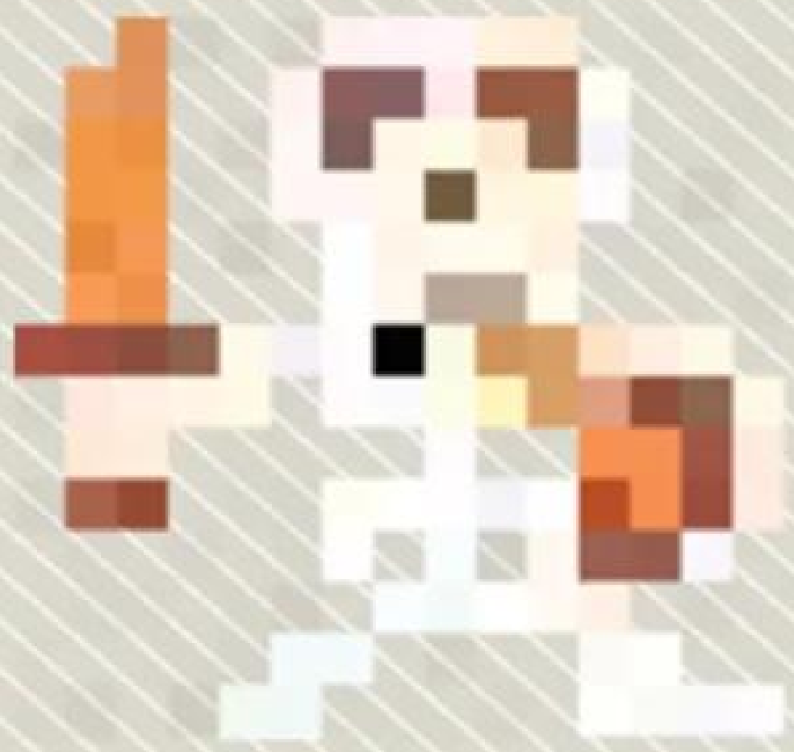
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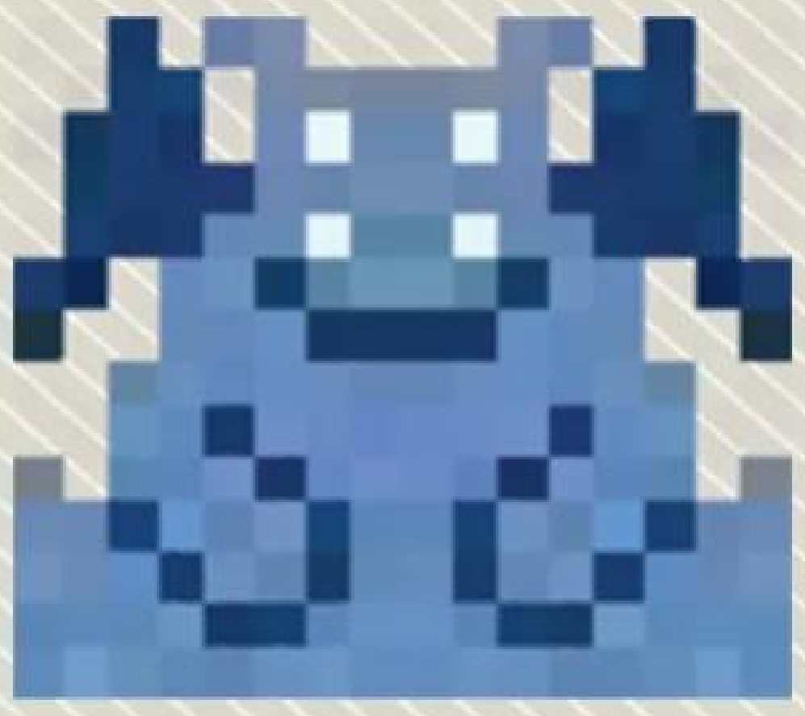
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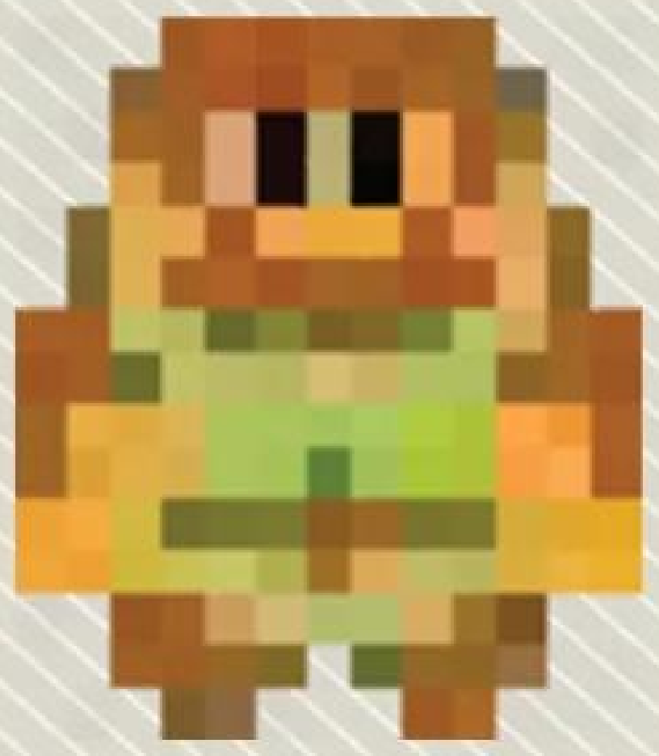
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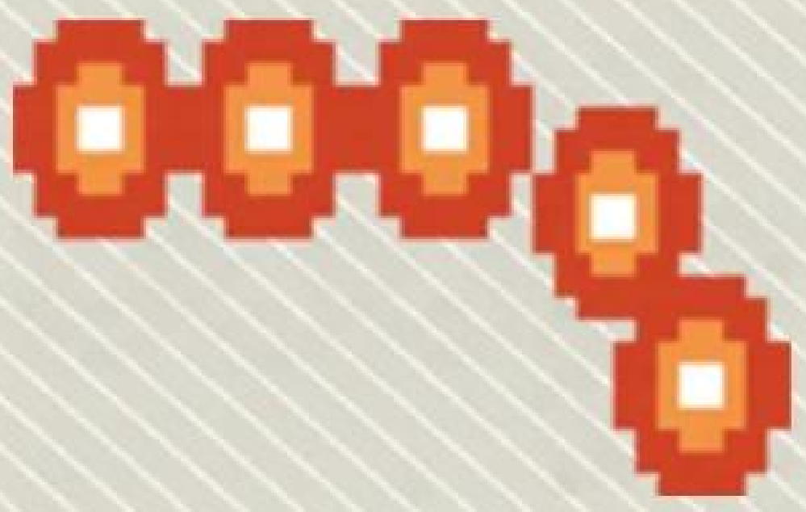
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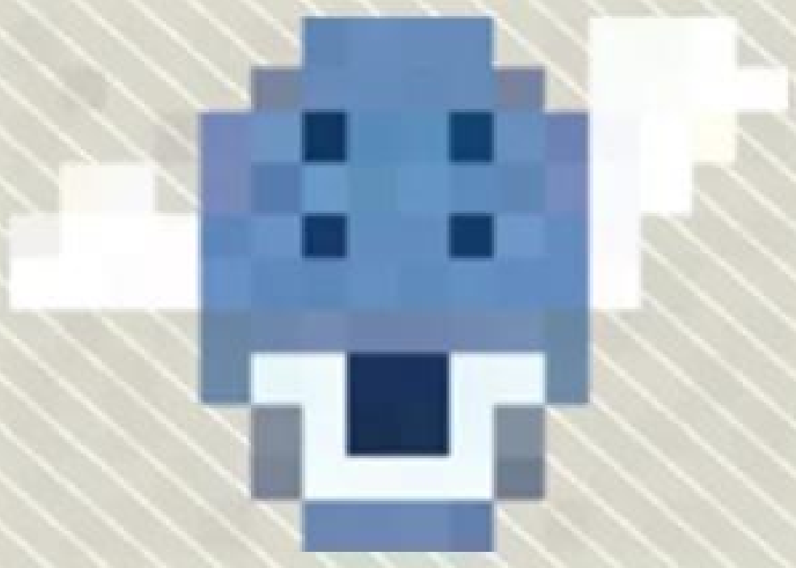
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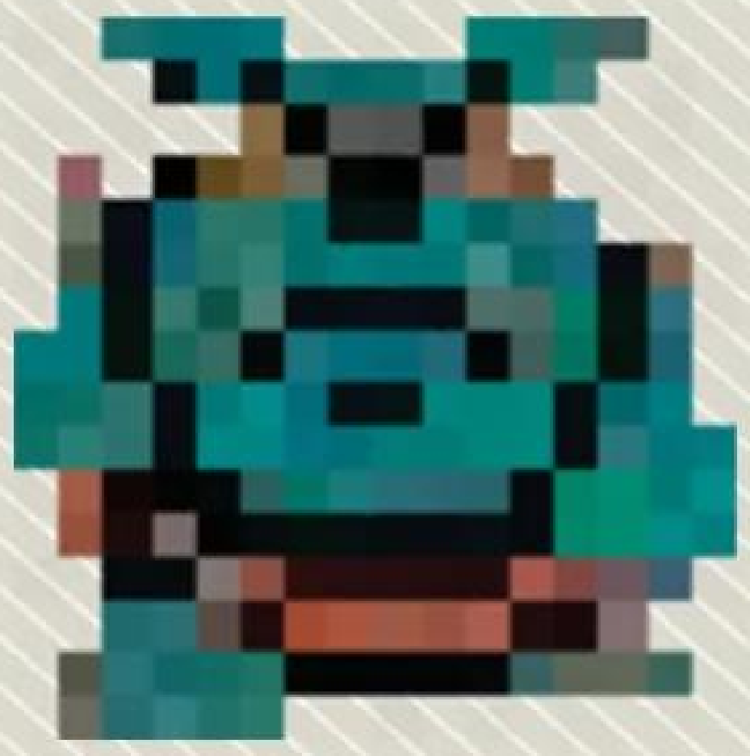
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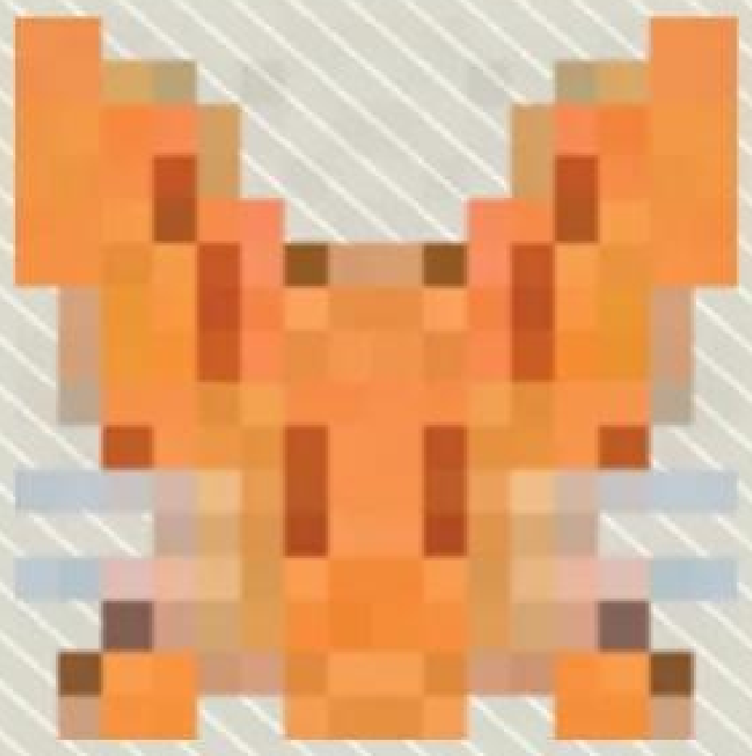
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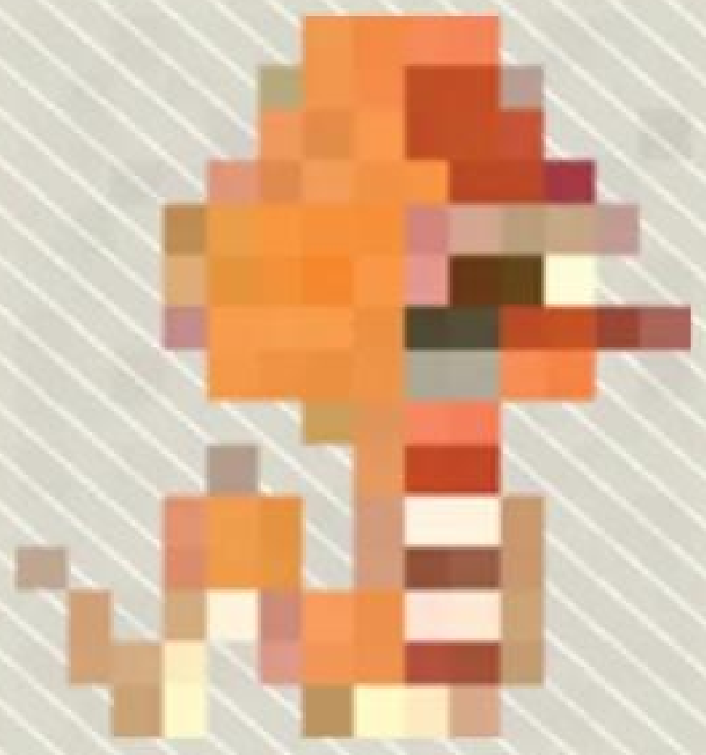
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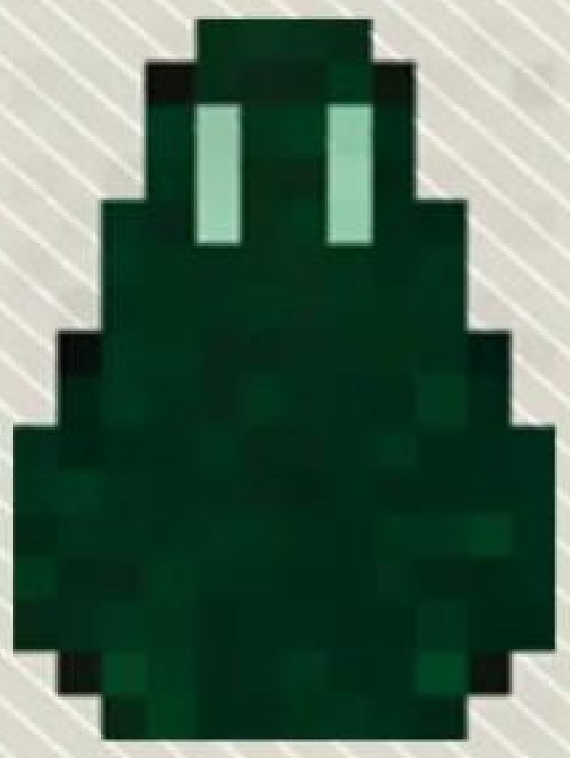
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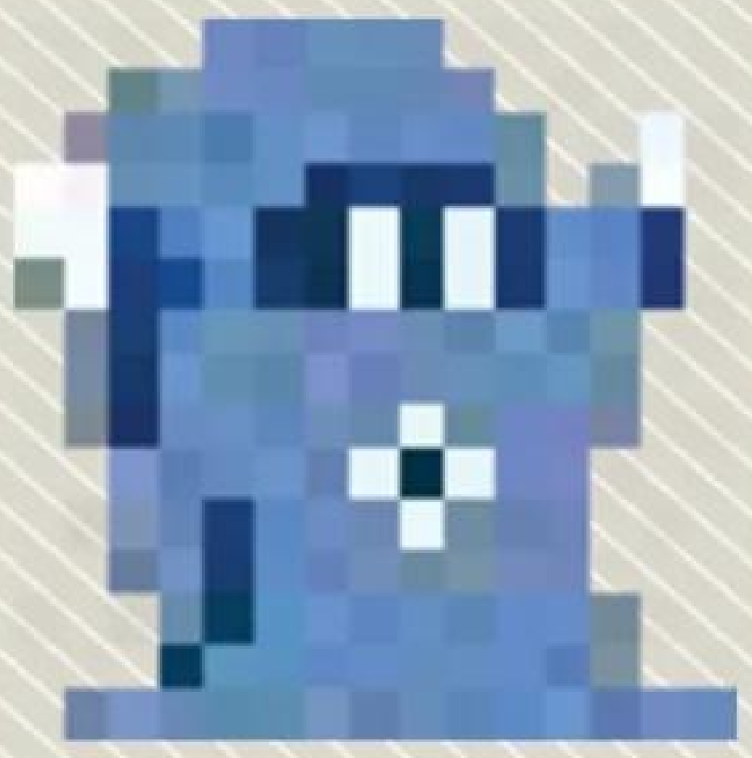
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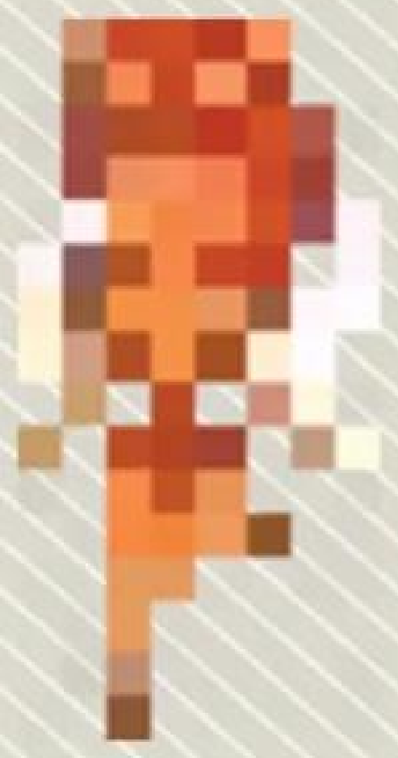
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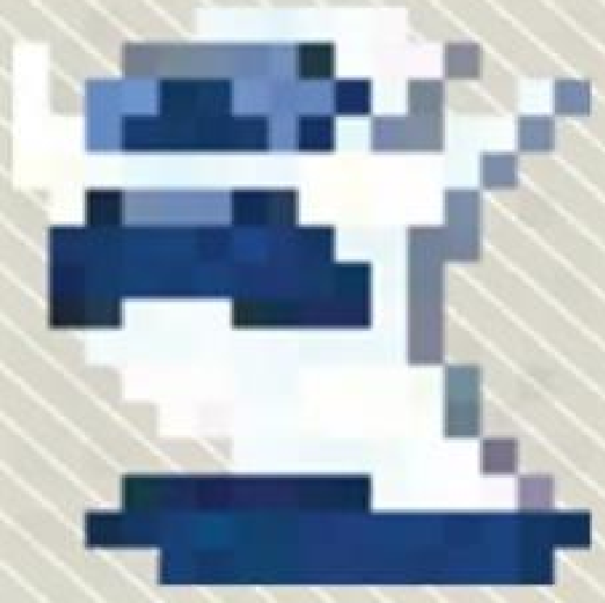
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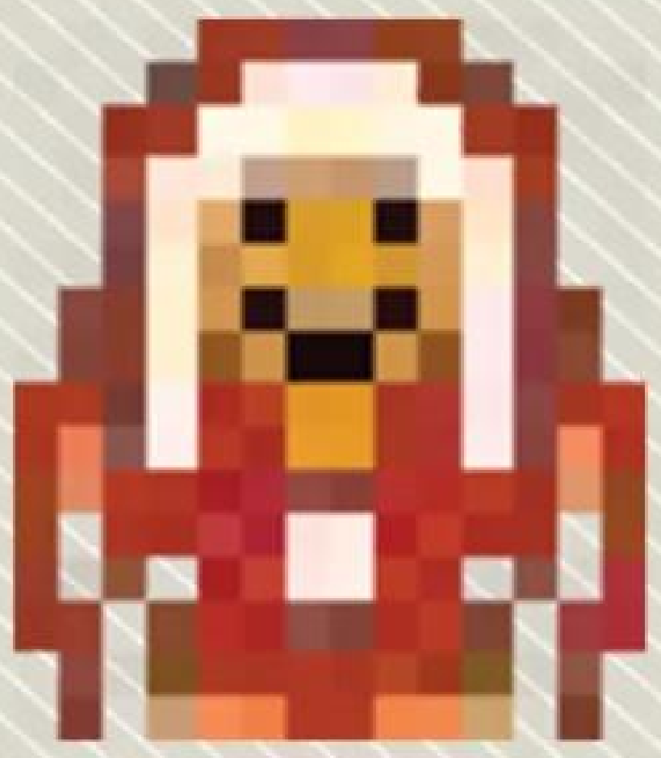
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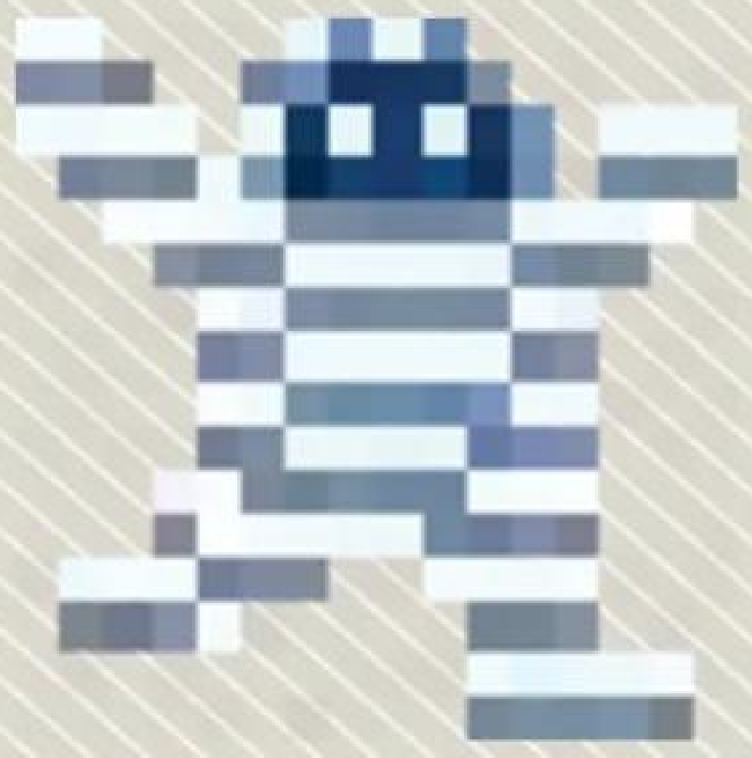
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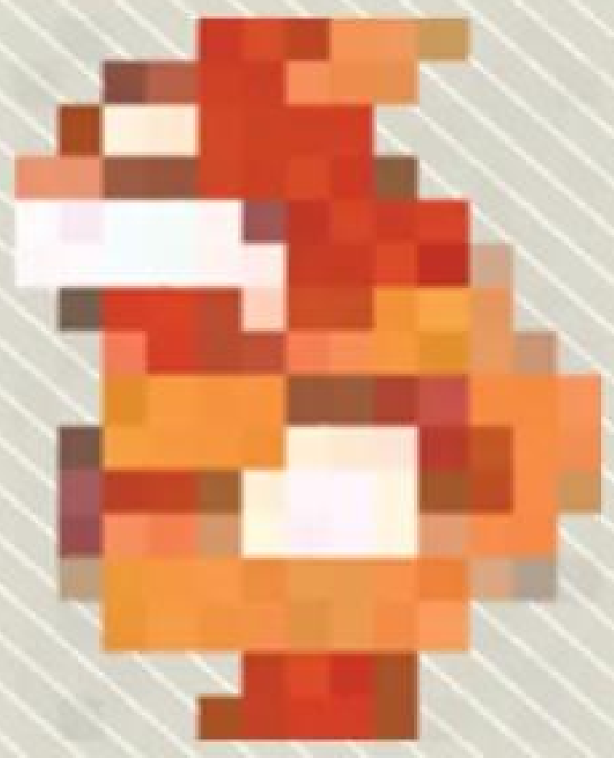
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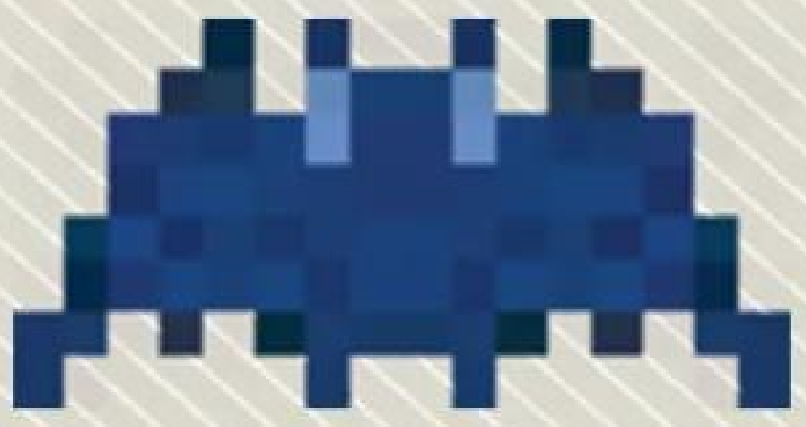
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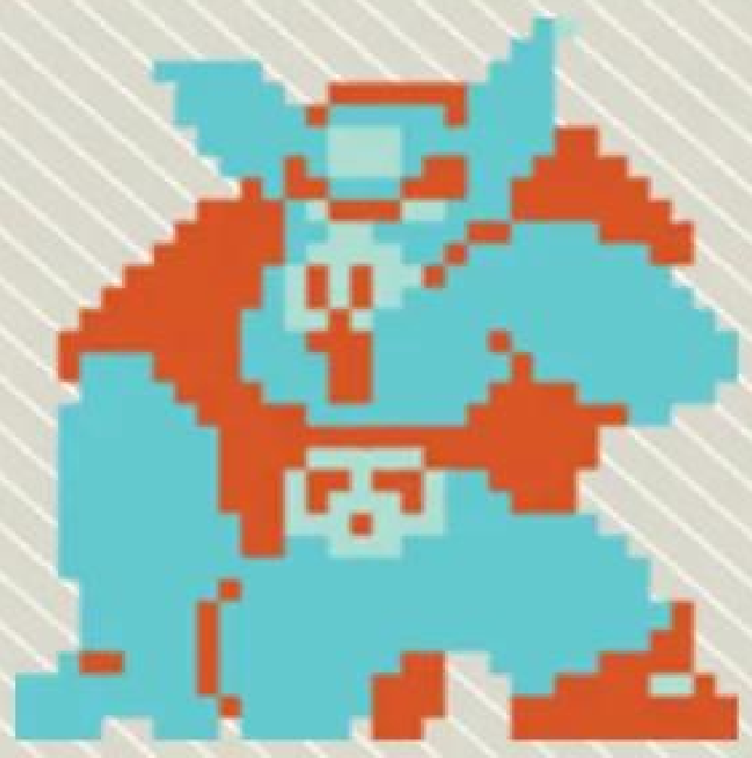
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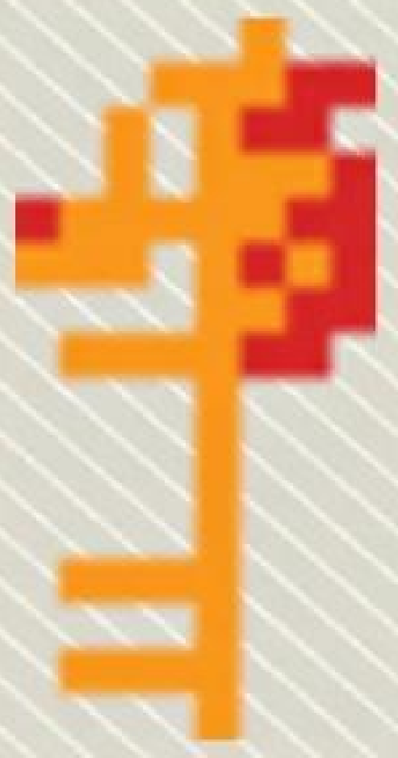
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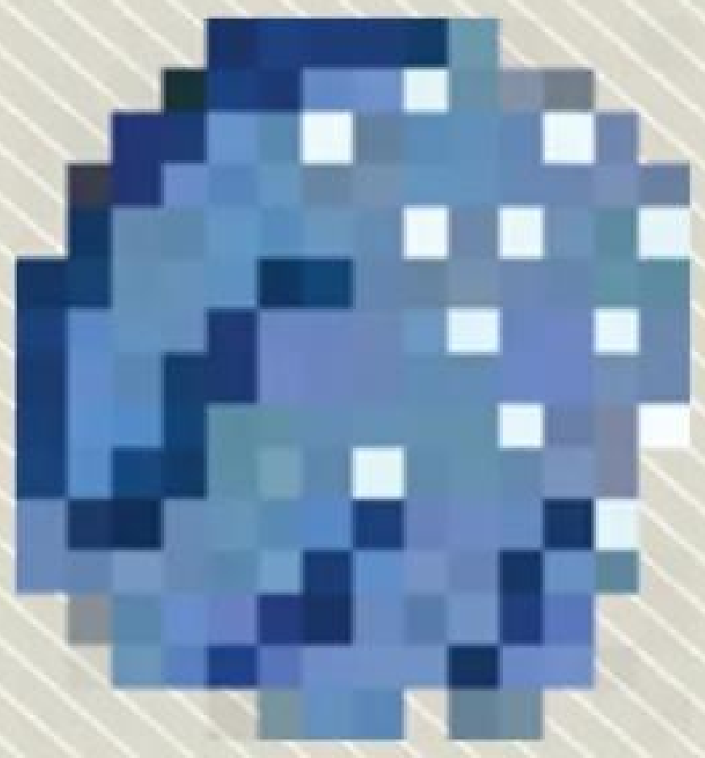
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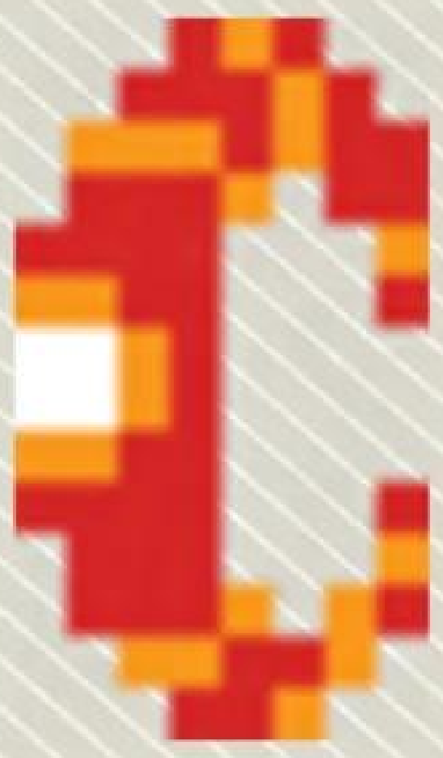
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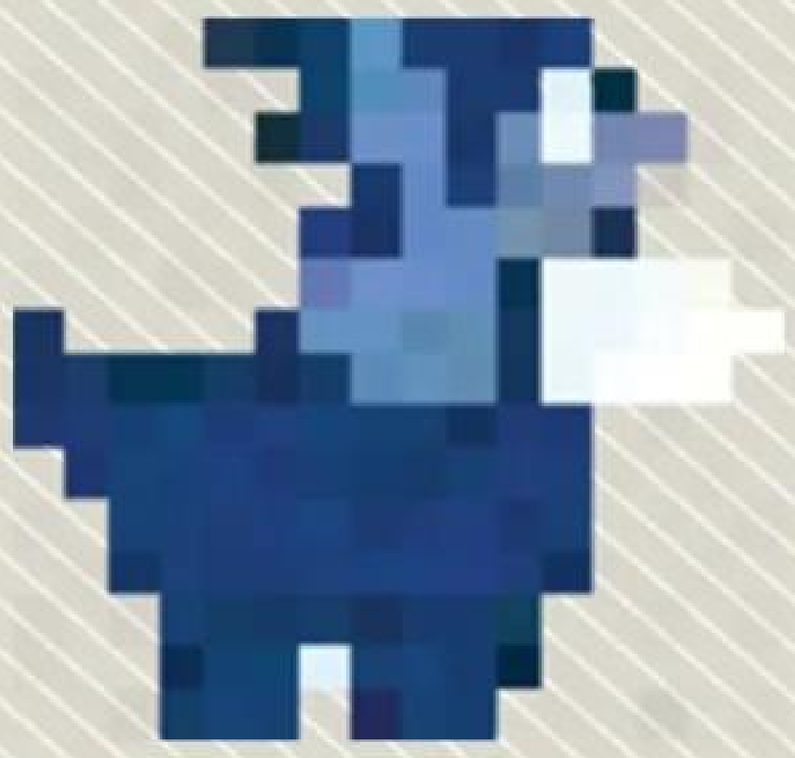
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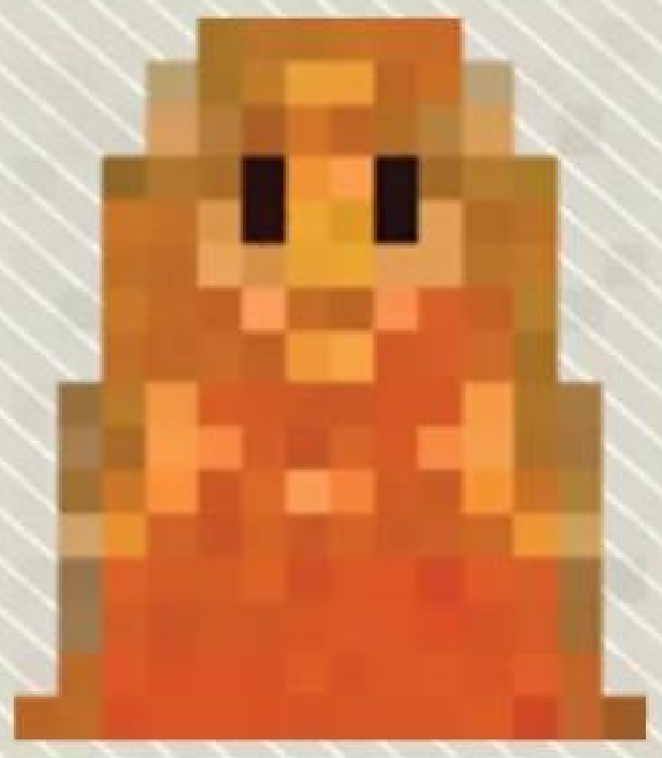
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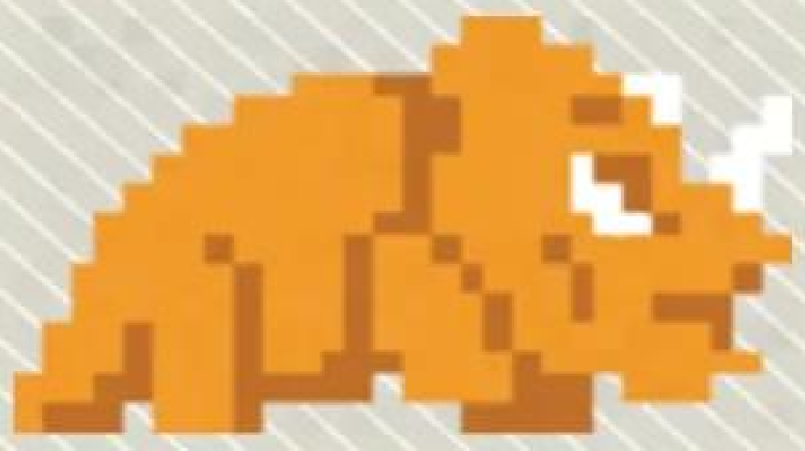
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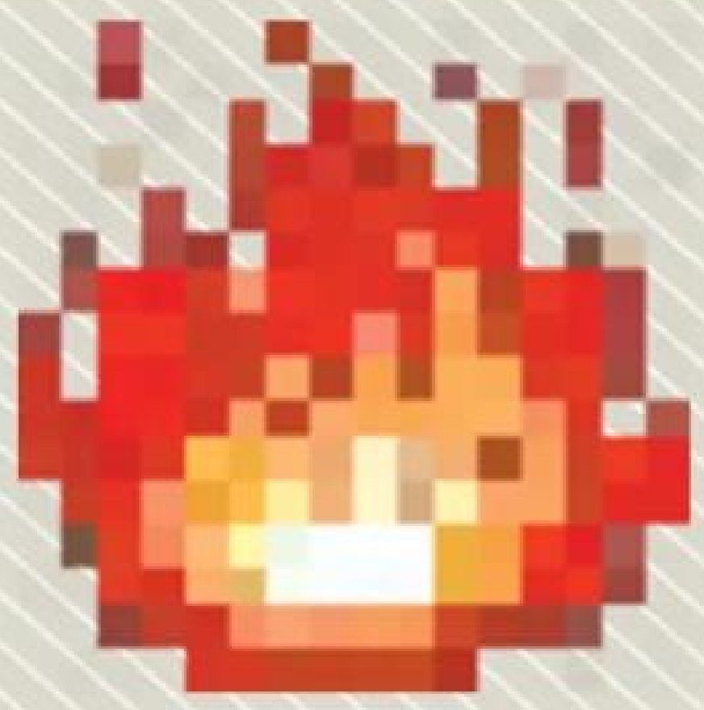
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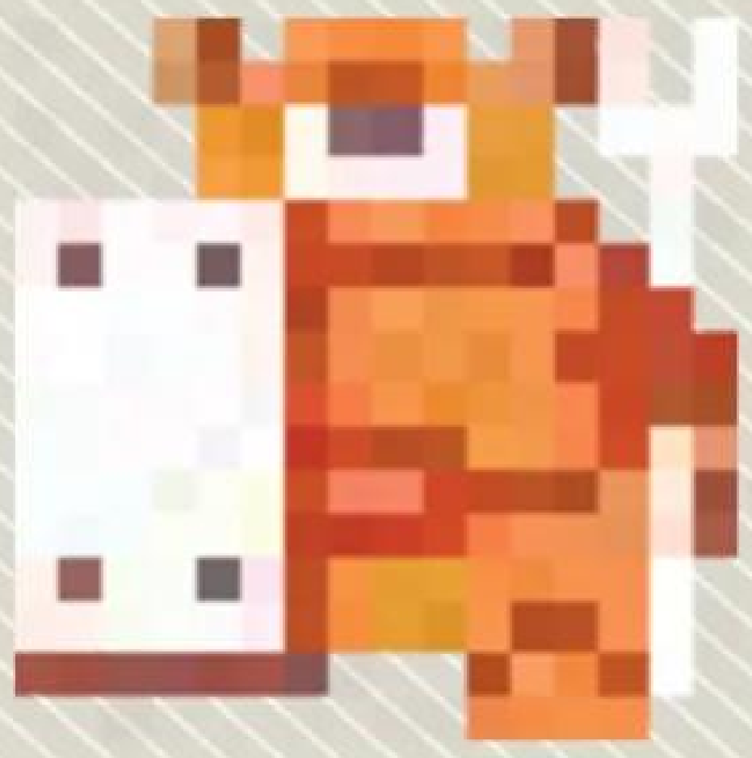

» Armos

Critical Reception

What the gaming press thought…

COMPUTER + VIDEO GAMES
FREE GIANT POSTER!

> "The Legend Of Zelda is a massive arcade adventure packed full of dragons, imprisoned princesses, traps and pitfalls"

- COMPUTER & VIDEO GAMES, 1987

Speedrun.com's Top times

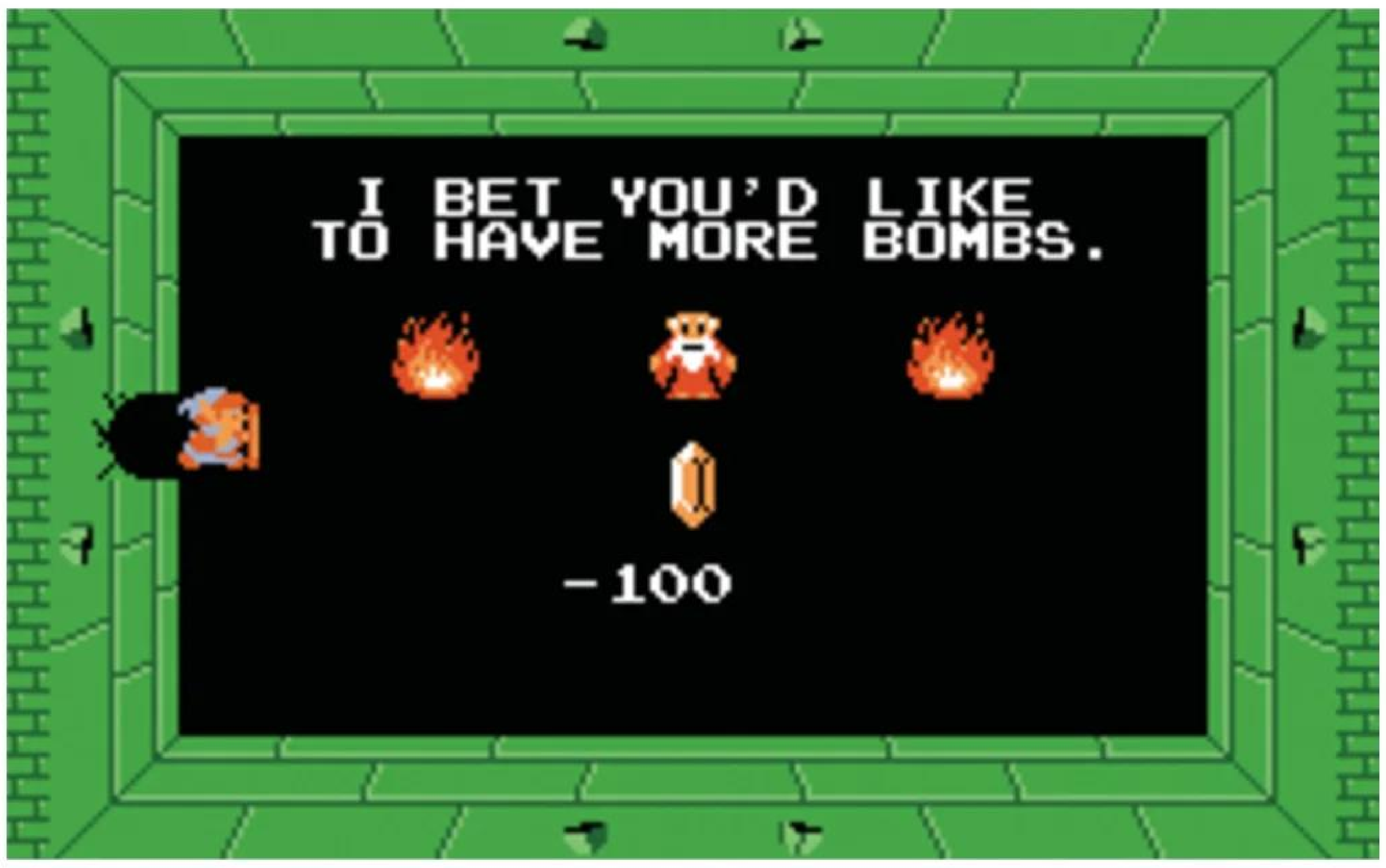
QUEST 1
- **NAME:** SCHICKSAL
- **TIME:** 00:26:55

QUEST 2
- **NAME:** RODRIGO LOPES
- **TIME:** 00:39:59

EXTREME CHALLENGE
(COMPLETE GAME WITHOUT SWORD, DON'T KILL OVERWORLD ENEMIES)
- **NAME:** DAMAGELESS & SWORDLESS SAVER
- **TIME:** 1:34:10

▶ on, of course, but *The Legend Of Zelda* was one of the first games to truly offer that kind of deep, long-term experience. And it did it very well indeed. So many early videogames can be credited as the first to do one thing or another, but *Zelda* did it all, establishing the rules of the modern adventure game and in such style that, alongside its sequels, it remains brilliantly playable a quarter of a century later, while Nintendo's competitors are still playing catch-up.

It's not just the tantalising nature of Hyrule's open world that makes *Zelda* so appealing. It's the way Link's ever-increasing inventory and abilities open up new routes through that world, ensuring that it rewards progress with a steady stream of surprises and discoveries right up to the end. There's the contrast between the freedom of the overworld and the tightly focused structure of the dungeons beneath the ground. There's the way each weapon Link acquires has more than one obvious use, forcing you to experiment and be creative with the way you play. And, of course, there's the wealth of secrets that permeate the world, not just rewarding the player but encouraging them to dig deeper, play harder and uncover hidden treasures that make you feel like the best player in the world. It's a deeply personal feature that makes you feel special for finding those secrets and personalises the experience, even though those secrets are, in reality, accessible to everyone.


I BET YOU'D LIKE TO HAVE MORE BOMBS.

-100

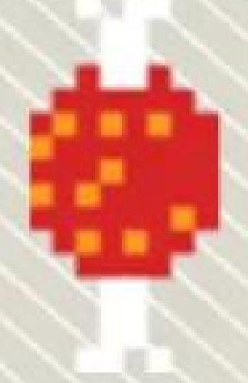
» More high explosives can never be a bad thing.

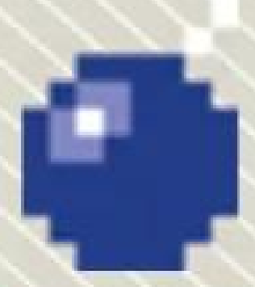
With 33 years under its belt, the *Zelda* series has since gone from strength to strength, and many people have a favourite entry in the series that isn't the first one. *A Link To The Past*, *Link's Awakening*, *Ocarina Of Time* and *Majora's Mask* could all legitimately lay claim to the title of Greatest *Zelda*, but there's something pure about that first game that sets it apart from its successors. Right from *Zelda II* onward, the series began to change. It still retained the core features of an overworld, a series of dungeons and an expanding bag of tricks, but it also lost something along the way. As the series has become increasingly preoccupied with telling a story, you could argue that it has also limited itself, weighing its opening moments down with unnecessary dialogue and lengthy tutorials that actually distance you from Link instead of doing the opposite.

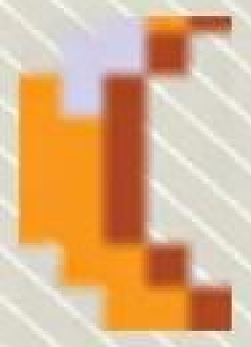
The Legend Of Zelda's real brilliance is that it has the confidence to just drop you into its world and leaves you to explore for yourself, experimenting with its mysteries and discovering secrets without any real hand-holding. Instead of simply telling you a story, it allows you to live the story; its events are driven by your decisions and actions. It feels unique, it rewards those who jump in at the deep end to go see what they can find, and it's a quality that the *Zelda* series would do well to recapture. ✱

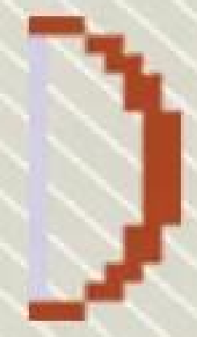
Power Ups

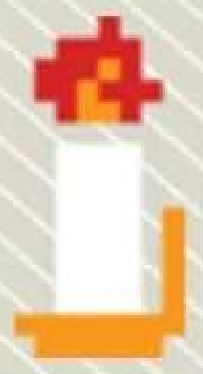
Some of The Legend Of Zelda's pick-ups have endured throughout the series' history, while it never quite happened for others…

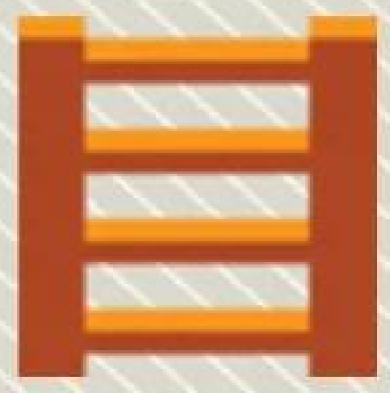

»Bait
This meat is bought from a shop and used to feed any Goriyas that block your path.

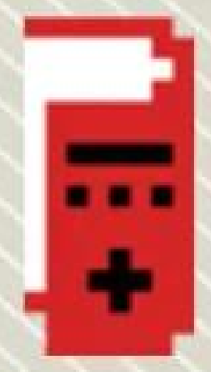

»Bombs
The bomb can be used to hurt just about any enemy but can also be used to open secret entrances.

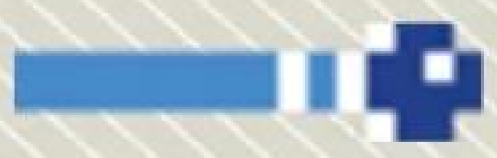

»Boomerang
The boomerang has two distinct uses. One violent to damage enemies; the other practical, as it can retrieve distant objects.

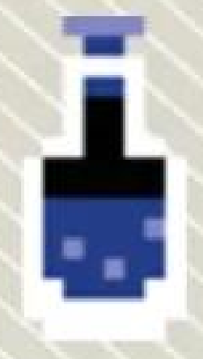

»Bow
The bow is the only thing that can kill Ganon, at least once you've acquired the silver arrows for it.

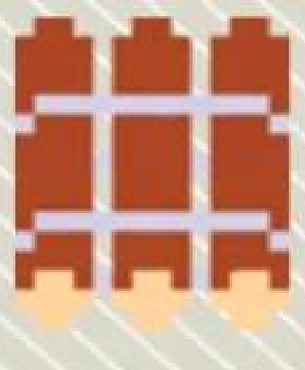

»Candle
This can be used to light your way, but it can also be used to burn bushes, sometimes revealing secrets.

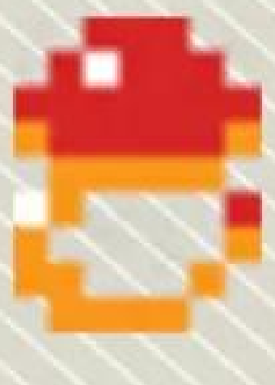

»Ladder
This item allows you to cross small sections of river to take short cuts and is essential for some dungeons.

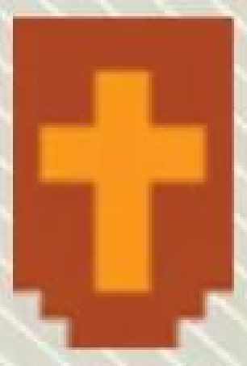

»Magic Book
An optional item that upgrades the wand so that it can shoot fireballs, making candles redundant.

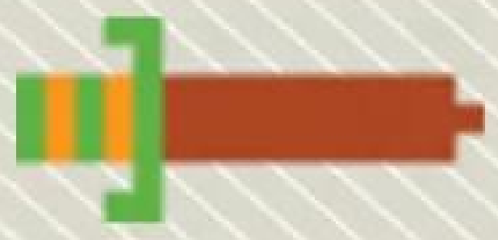

»Magic Wand
It's a wand! What more do we have to tell you? It uses your magic energy to shoot beams.

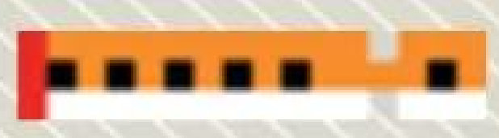

»Potions
Potions come in two varieties: blue and red. Blue restores some of your life while the red replenishes it all.


»Raft
Allows Link to get around the waterways of Hyrule. He can embark or disembark the raft at any dock.


»Rings
These, much like every other magic item, can be found in two colours. Each increases Link's strength.


»Shield
The wooden shield just repels ordinary attacks. The magic shield, however, can block fireballs.


»Swords
There are three swords – Wooden, White and Magical – each one more powerful than the last.

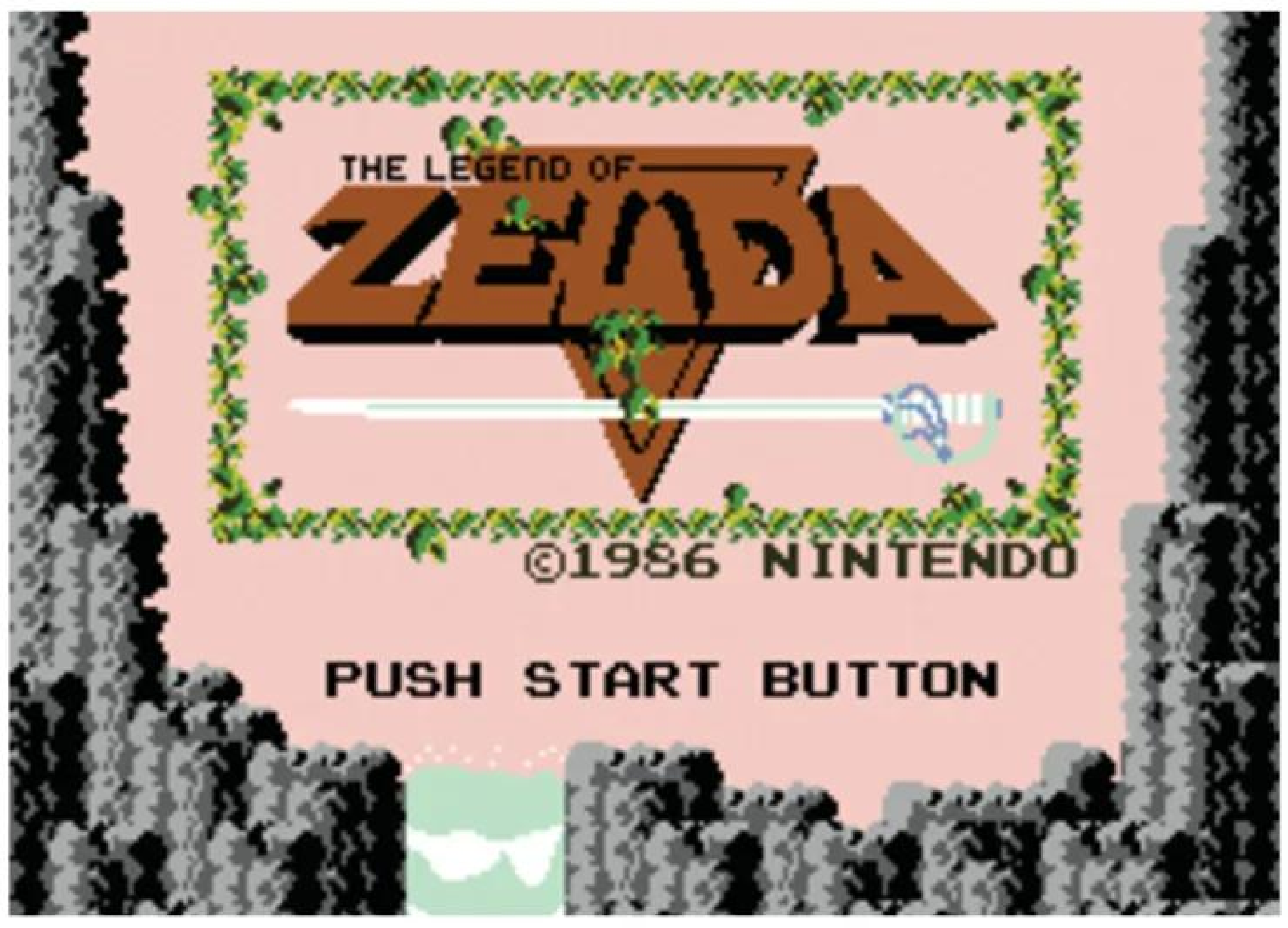

»Whistle
A single-use item that is essential for beating Digdogger, the boss of the fifth dungeon.

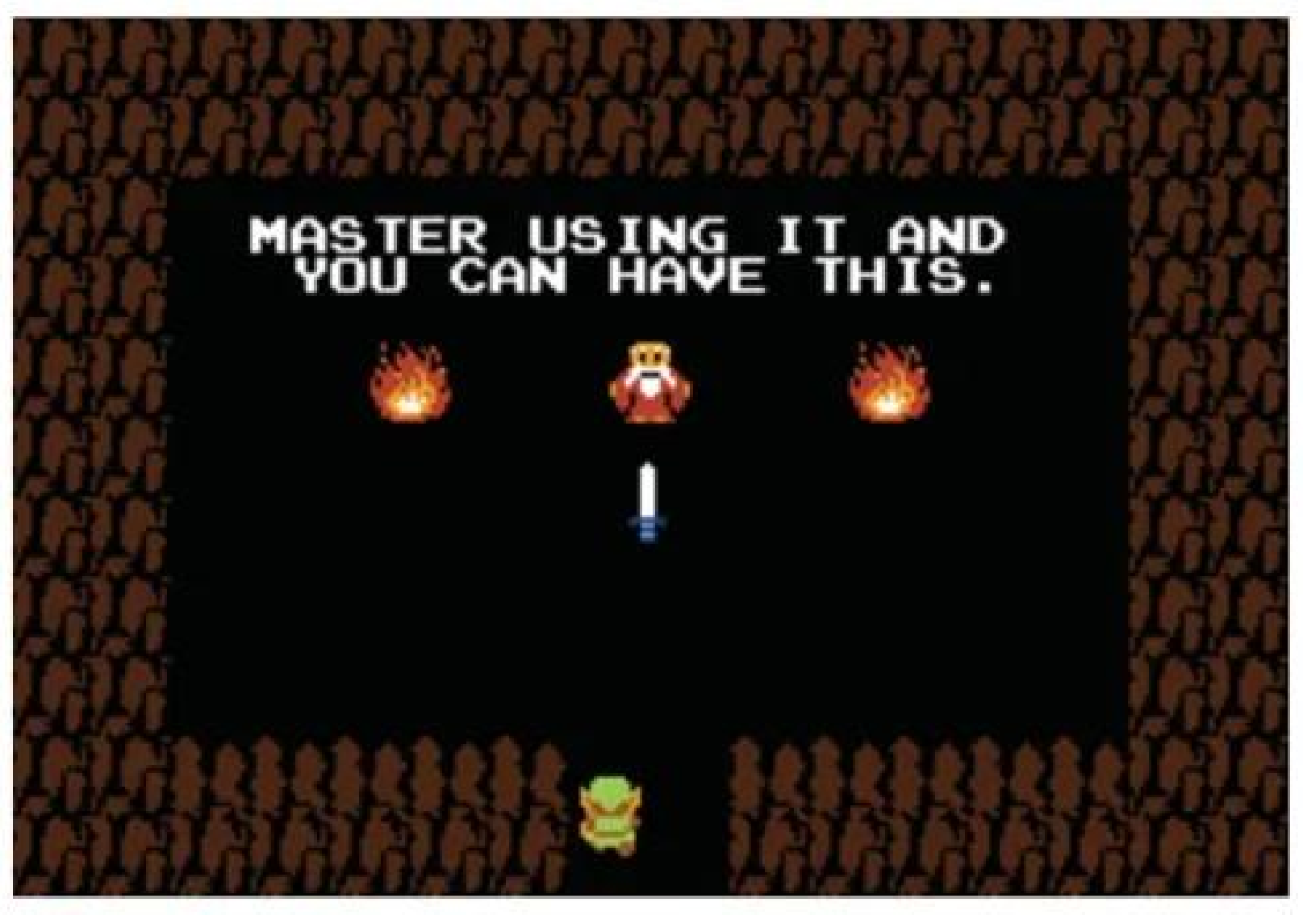
Memorable Moments

We present the best bits of the best NES game Nintendo ever made

Signature tune

The now-iconic *Zelda* theme slowly plays and builds up speed as a waterfall pours down the title screen. Koji Kondo's composition is yet another classic, leading to his involvement in every game in the series up until *Ocarina Of Time*.

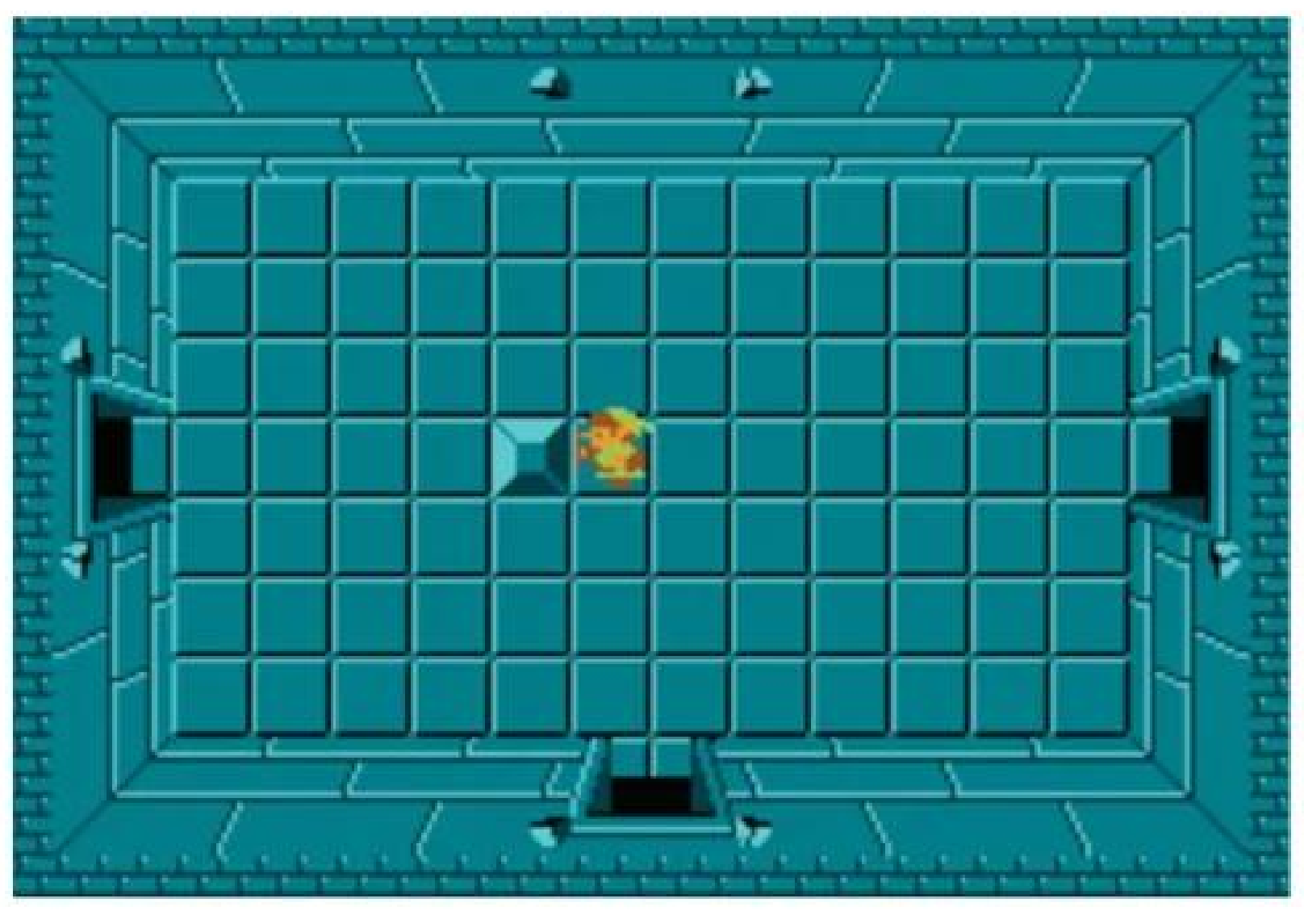




MASTER USING IT AND YOU CAN HAVE THIS.

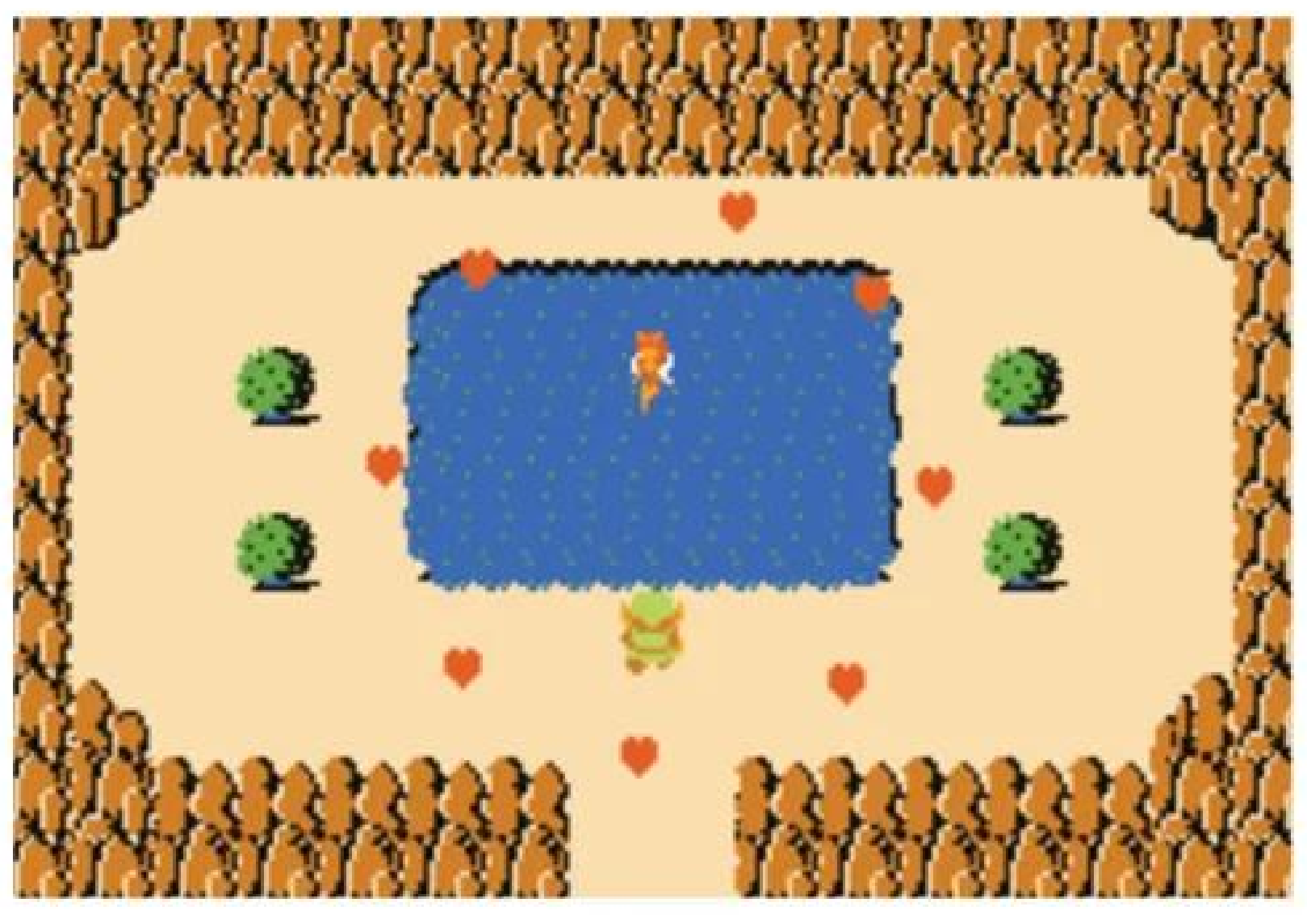
Good advice

One of the few pieces of dialogue is also the most memorable. Though you can play the whole game without the sword, the old man's advice is right. You'll do much better with it, and what's a *Zelda* game without a sword?



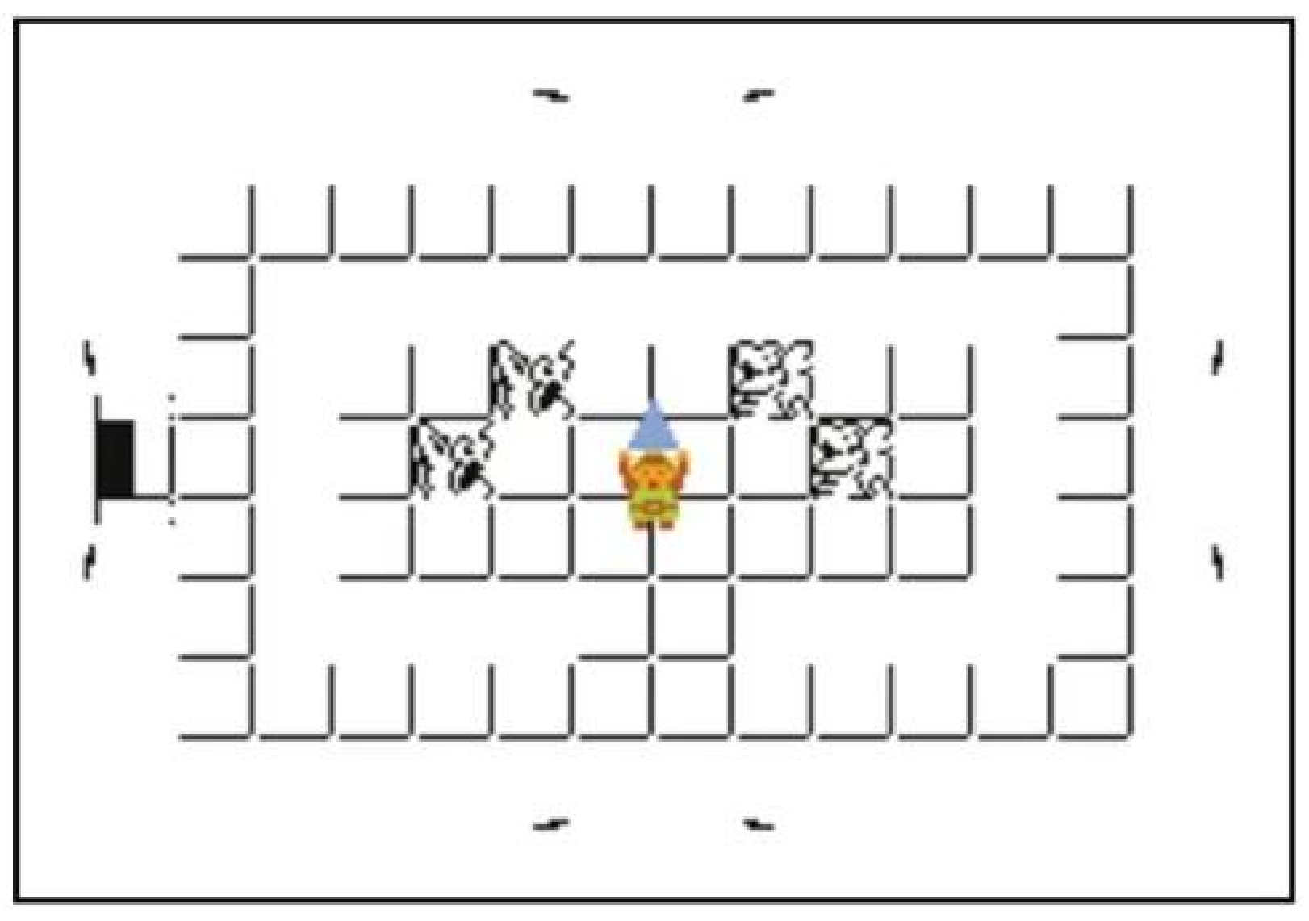
Secret exit

Finding secrets is one of *Zelda*'s greatest pleasures, not to mention one of its inspirations, and here's one of the earliest. A door without a keyhole is opened by pushing a seemingly ordinary block to the left.



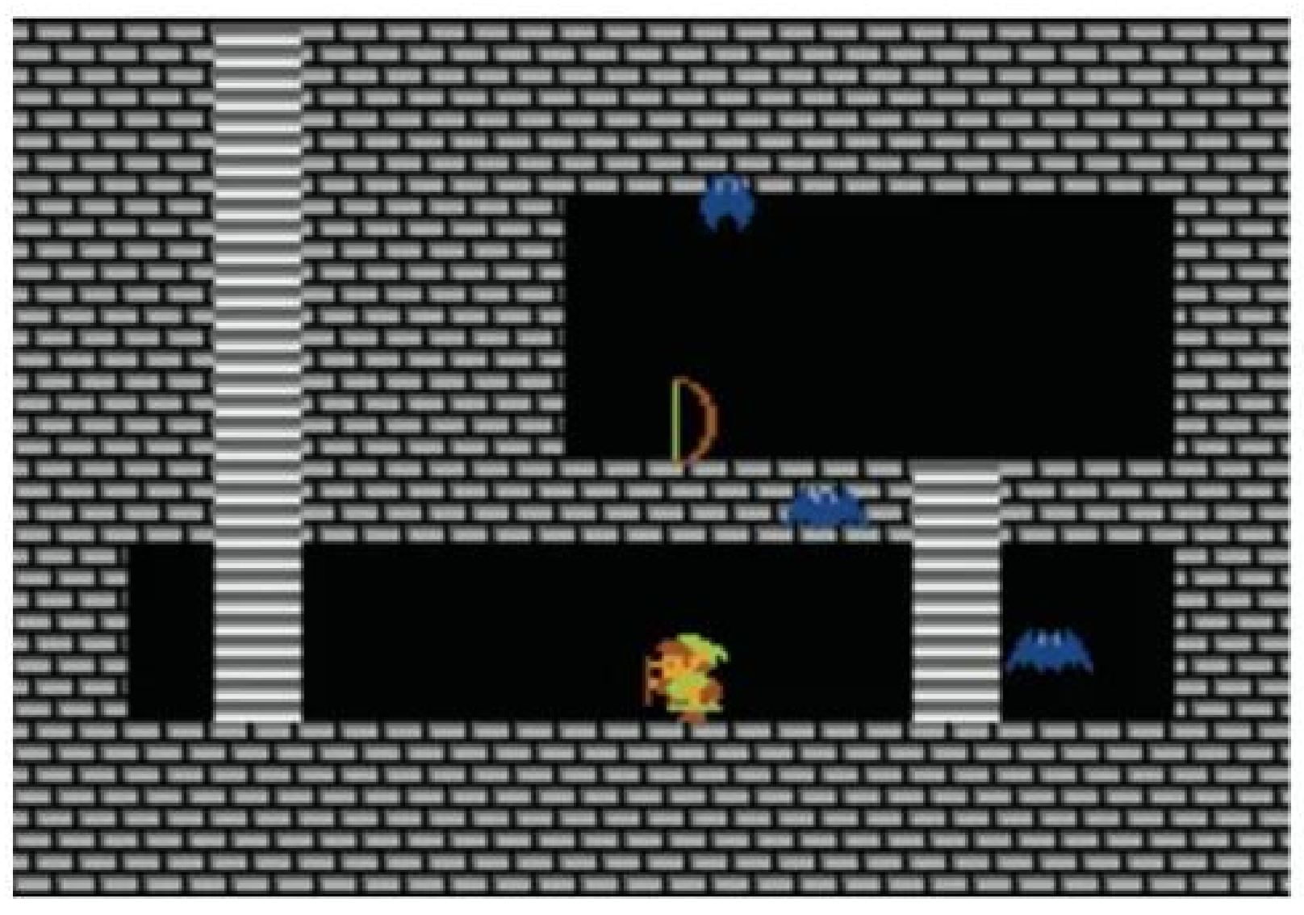
Fairy godmother

Find an enclosed pool and a fairy will pop out and rejuvenate Link's health with a swirl of hearts. It's another feature that has cropped up time and again through the series, with the fairies' abilities and applications expanding.



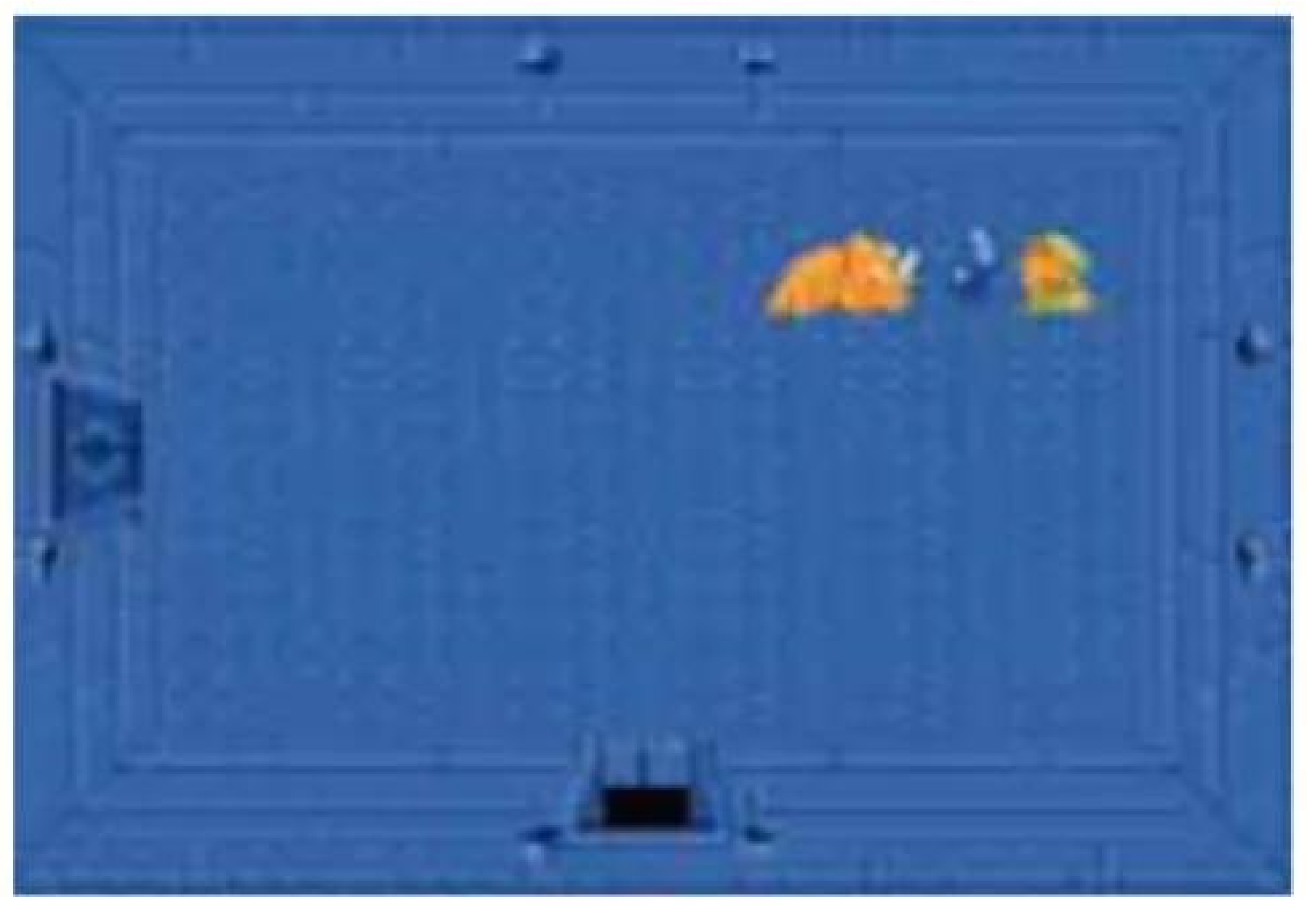
Triforce get!

Link finds his first piece of the Triforce and holds it above his head in a way that has now become an identifiable characteristic of the little elf boy. The Triforces of Wisdom and Power appear in the original, with Courage debuting in the next.



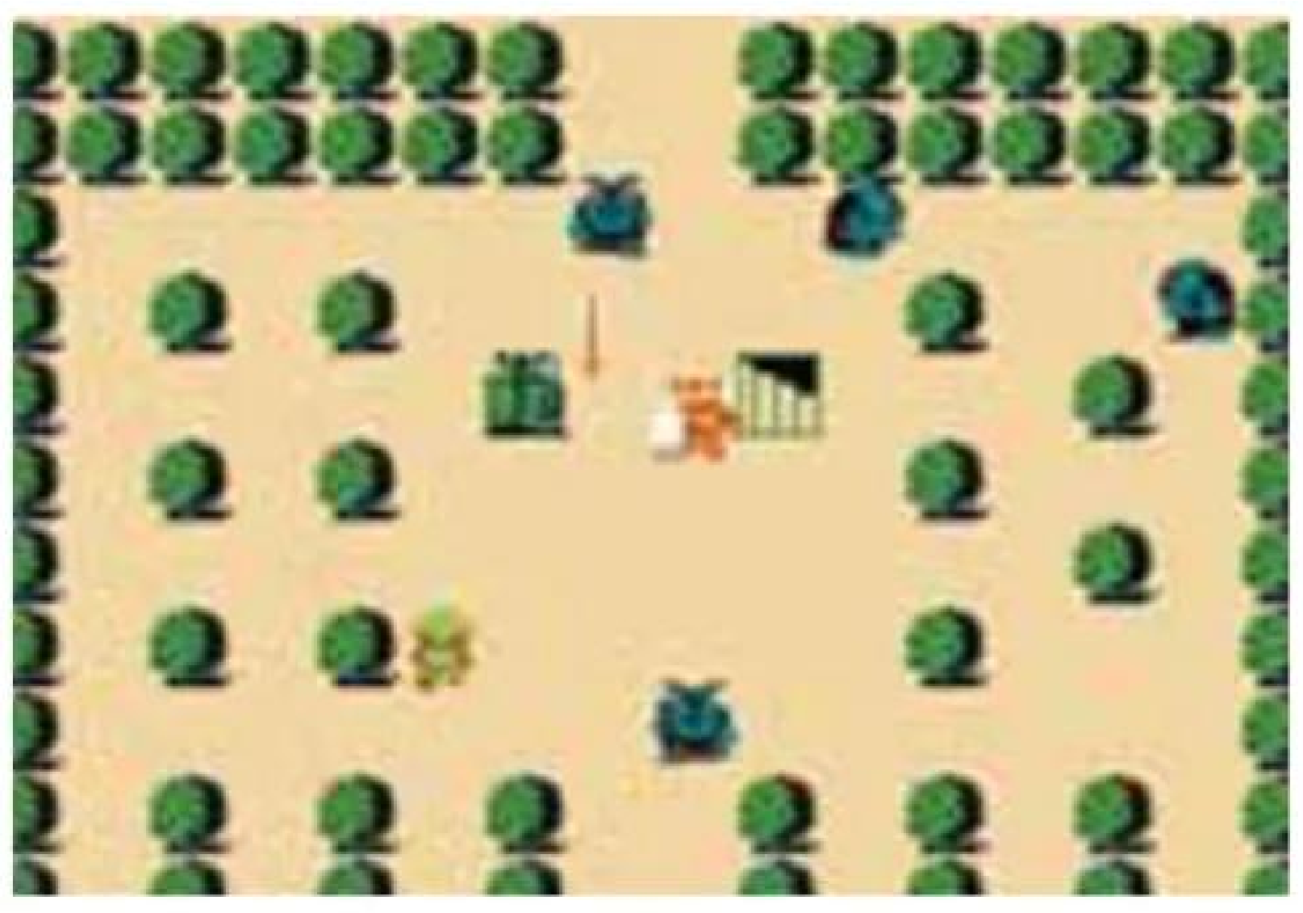
Side story

Some dungeon screens switch perspective to a side view, a trick that was adopted wholesale for *Zelda II: The Adventure Of Link* and would return for some brief sequences in the Game Boy's *Link's Awakening*.



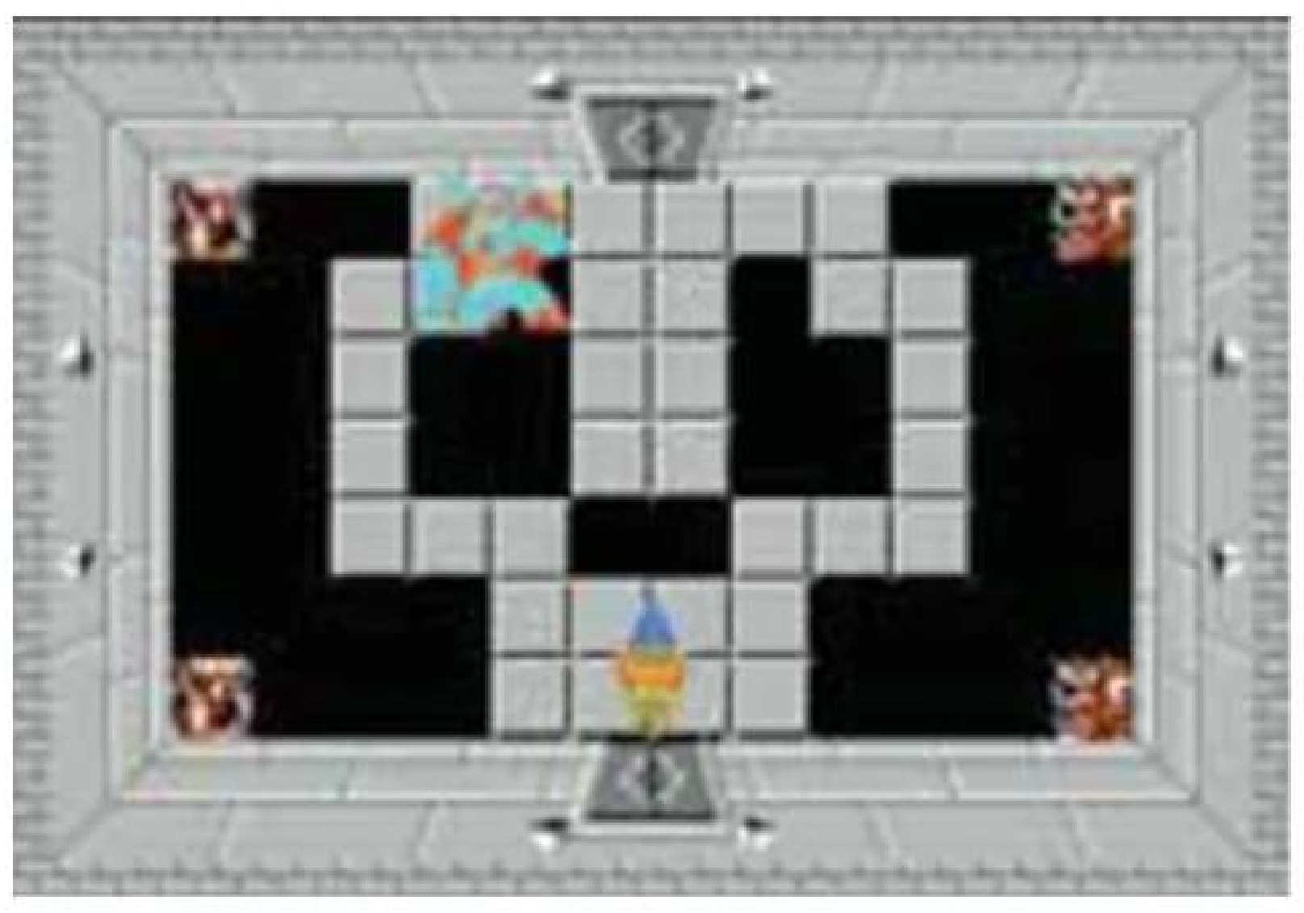
Hard to swallow

The brilliant Dodongo boss is defeated by getting him to eat and swallow a bomb, causing him some nasty indigestion when it explodes in his belly. A similar boss, King Dodongo, became an iconic sequence in *Ocarina Of Time*.



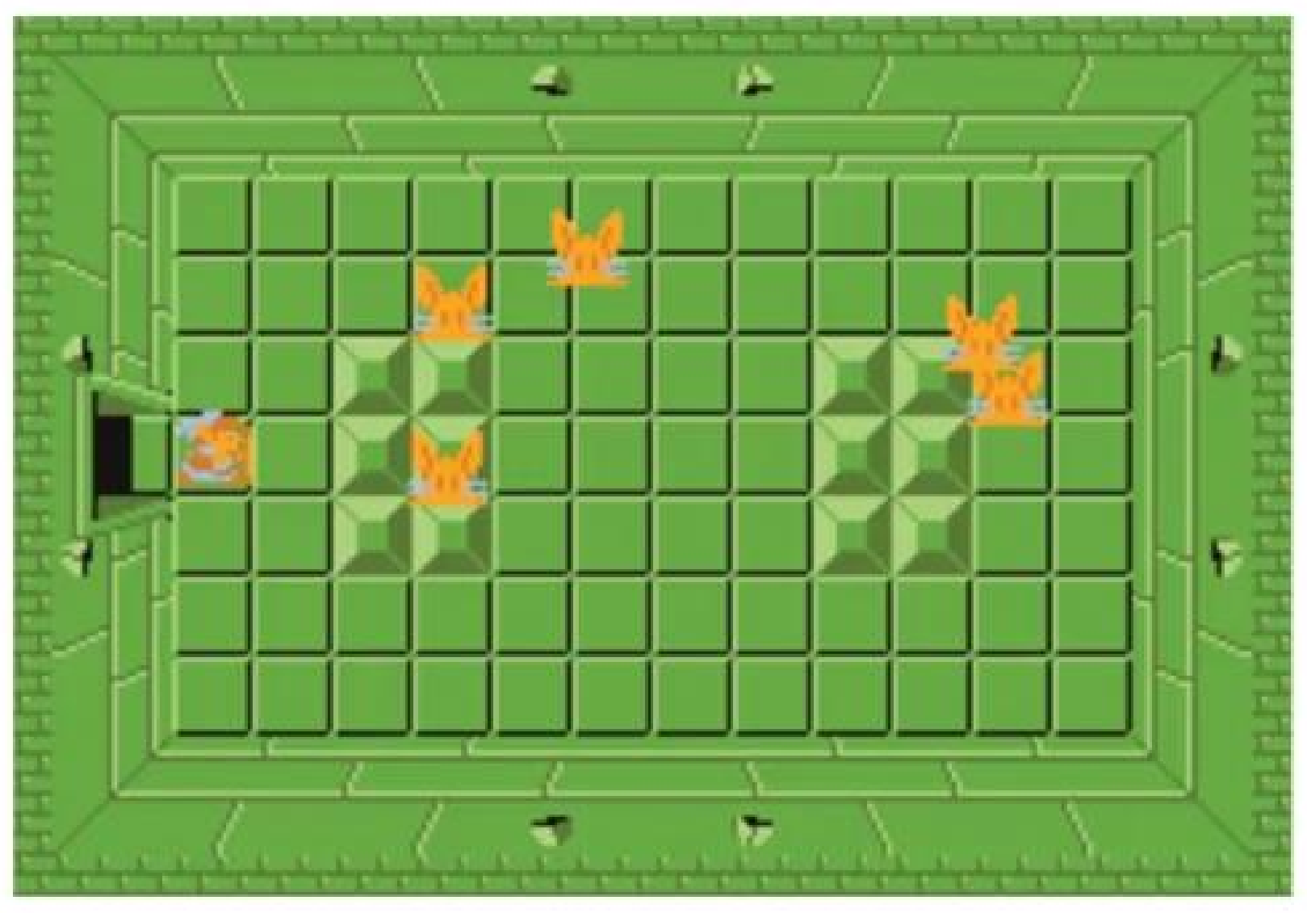
Hidden stairs

Another great secret. Touch a statue and it will come to life to attack you. Some statues stand over stairways that lead to secret underground rooms, tempting players to engage them in combat in the hope of some reward.



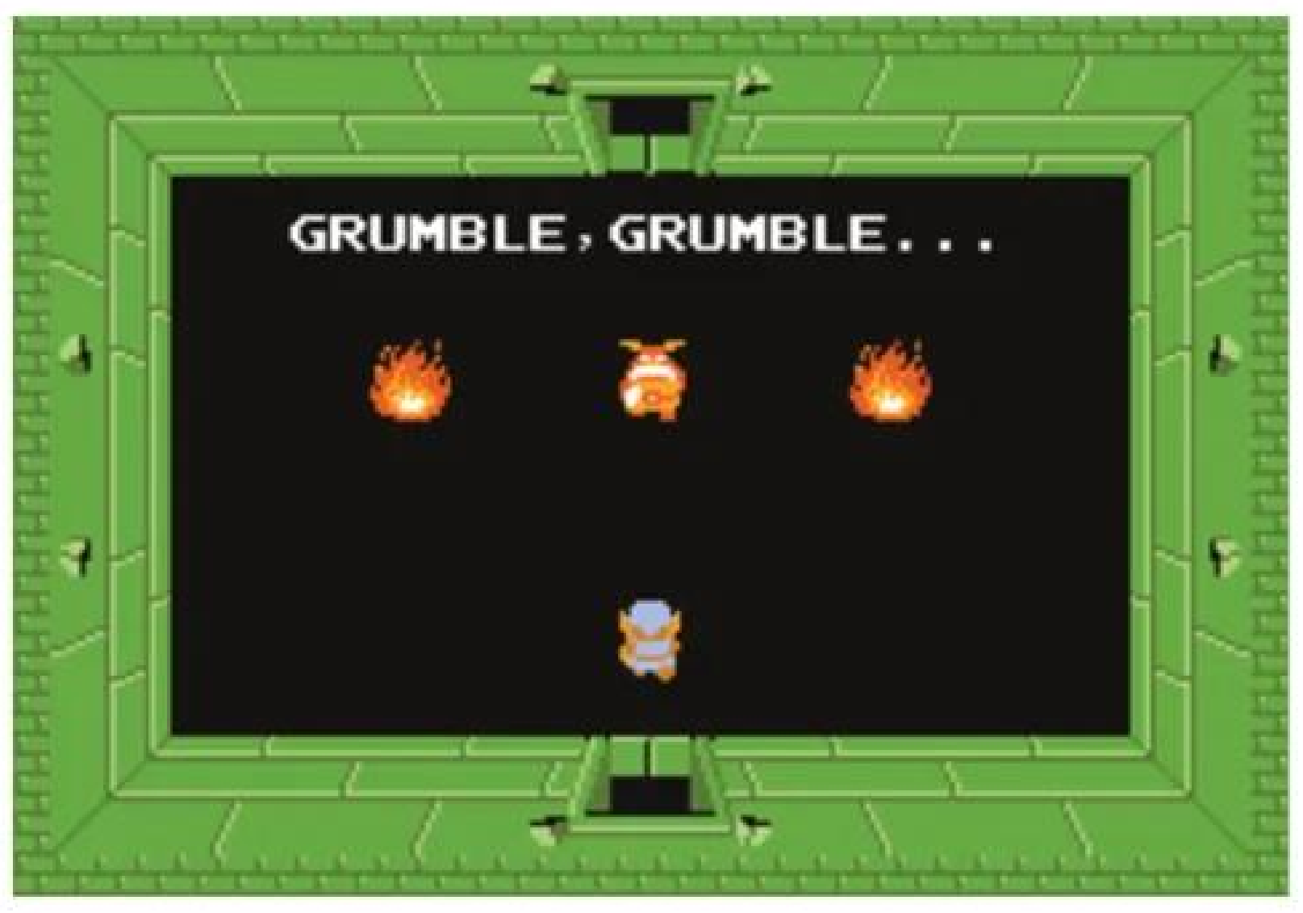
Boss hog

The final showdown with Ganon reveals him to be some kind of grotesque demon pig, much more monstrous than the human reinterpretation in *Ocarina Of Time*. Recent games tend to give him a hideous second form.



Loud noises!

In the Japanese release of *Zelda* you can shout into the Famicom microphone to hurt Pols Voice enemies. But you can't in the NES release. So in Japan it's a memorable moment. Over here it's barely even a regular moment.



GRUMBLE, GRUMBLE...

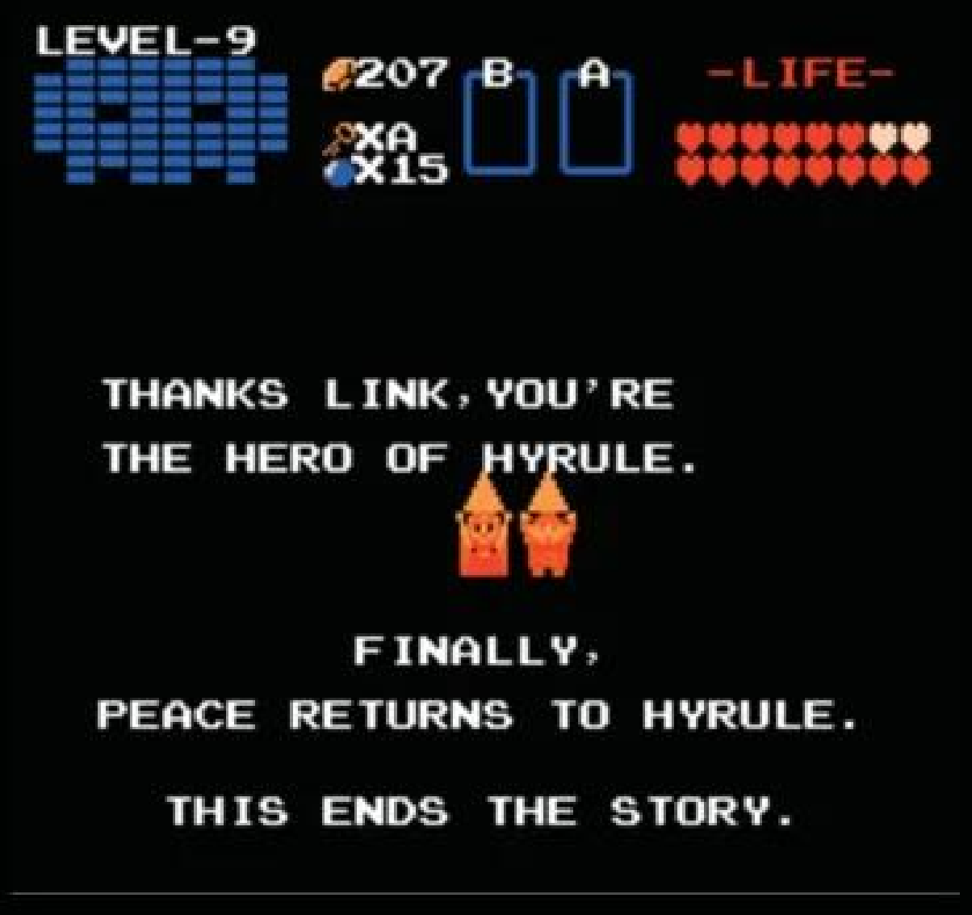
Feeding time

This Goriya isn't having a moan; it's actually his stomach rumbling. Feed him the meat and he'll let you pass. The first time a *Zelda* enemy defies expectations of simply being sword fodder and not the last.

> Zelda's ending is fairly typical for adventure games, until it reveals that there's a whole new quest to play through

LEVEL-9
109
X12
B
A
-LIFE-

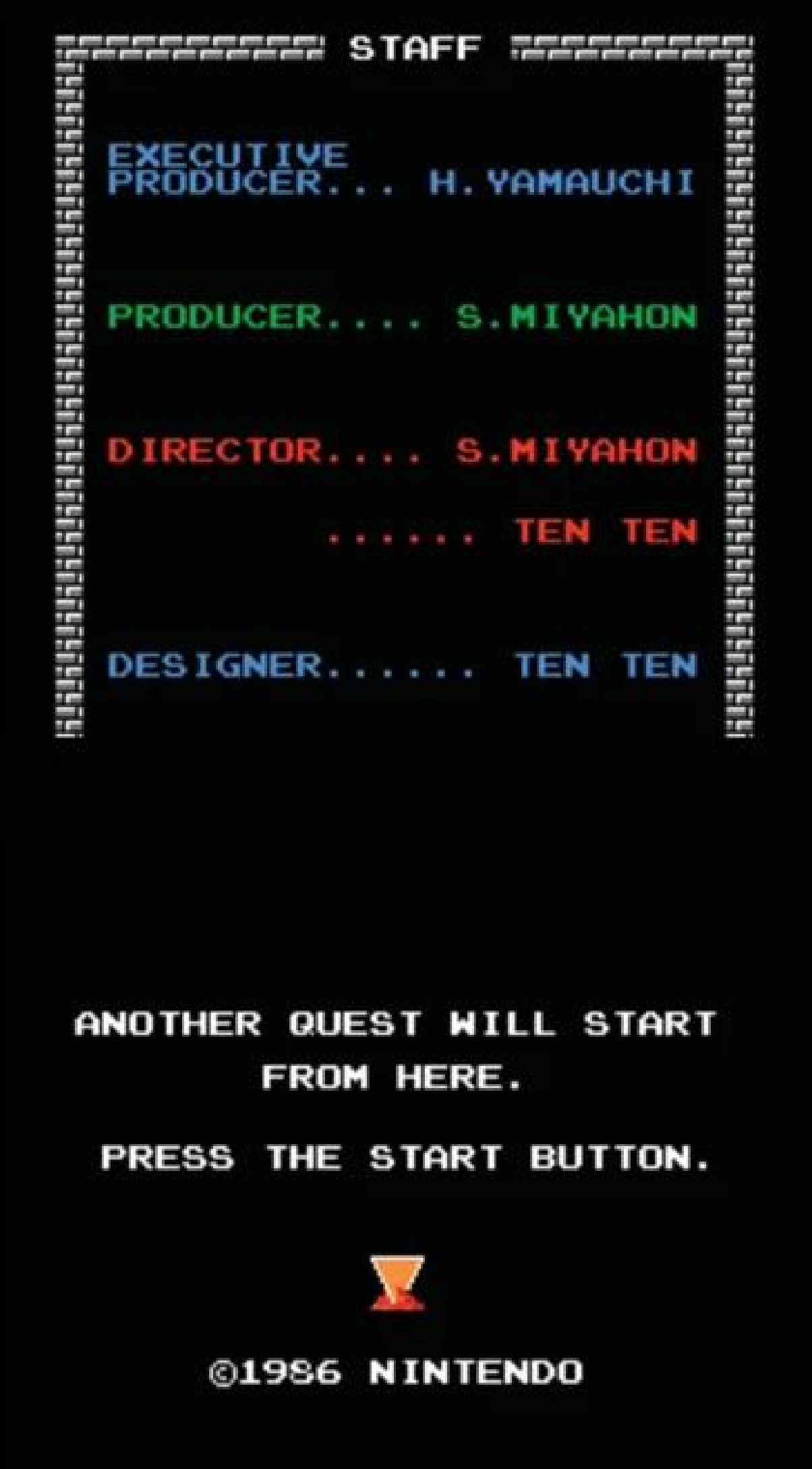
LEVEL-9
207
X15
B
A
-LIFE-



THANKS LINK, YOU'RE THE HERO OF HYRULE.

FINALLY, PEACE RETURNS TO HYRULE.

THIS ENDS THE STORY.



STAFF

EXECUTIVE PRODUCER... H. YAMAUCHI

PRODUCER.... S. MIYAHON

DIRECTOR.... S. MIYAHON

...... TEN TEN

DESIGNER...... TEN TEN

ANOTHER QUEST WILL START FROM HERE.

PRESS THE START BUTTON.

©1986 NINTENDO

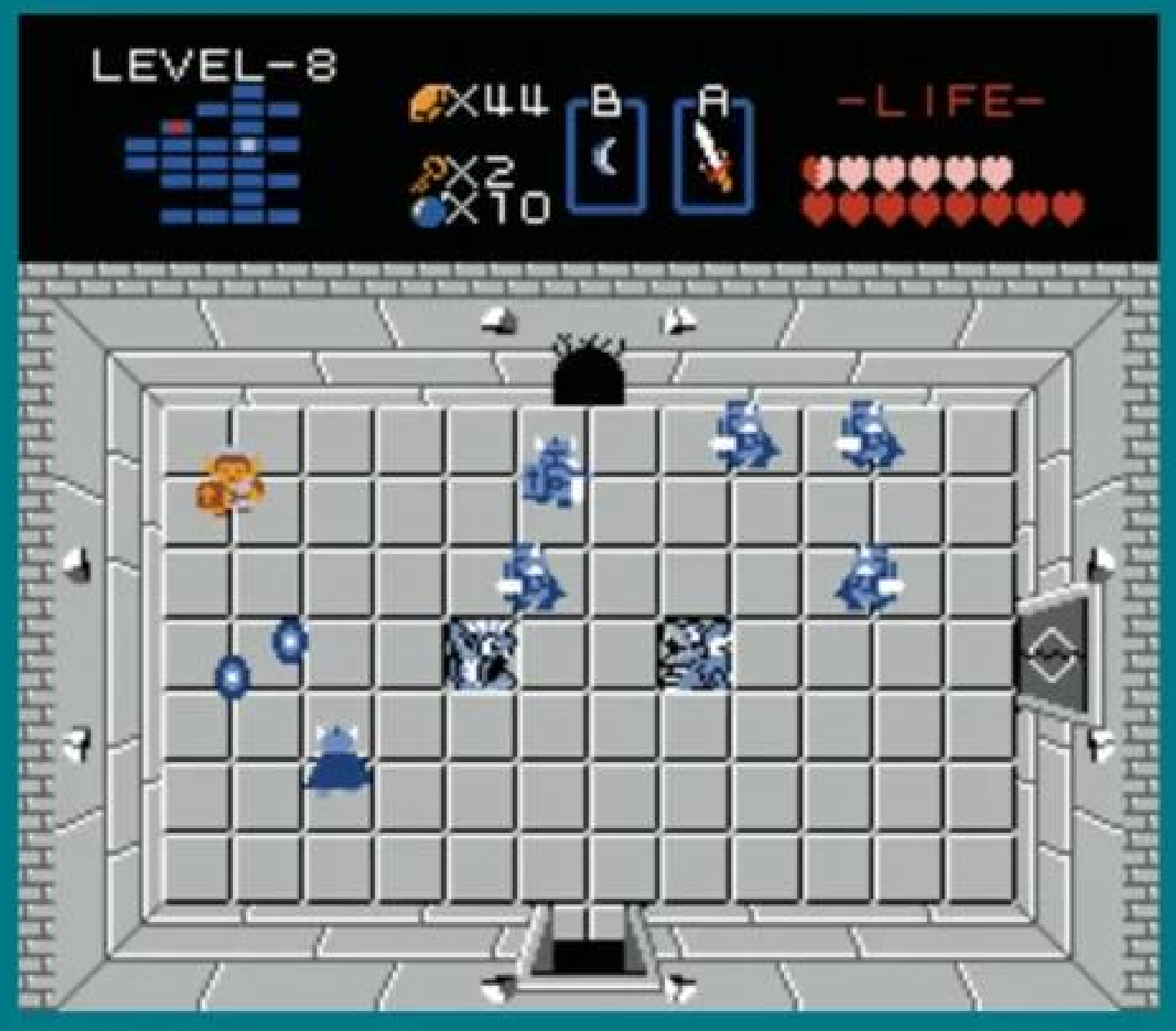
The Versions Of Zelda

There have been many more versions of the original Legend Of Zelda than you probably think. Here's every one and the differences between them

BUY SOMETHIN'
WILL YA!

PROTOTYPE (1985, estimated)

A prototype version of the original Famicom Disk game, only recently discovered in late 2010. The prototype differs from the real thing in several ways, most notably that it's a lot easier thanks to a higher distribution of rupees and slightly different enemy arrangements. The disk image is available to download from **www.lostlevels.org**.



FAMICOM DISK SYSTEM (1986)

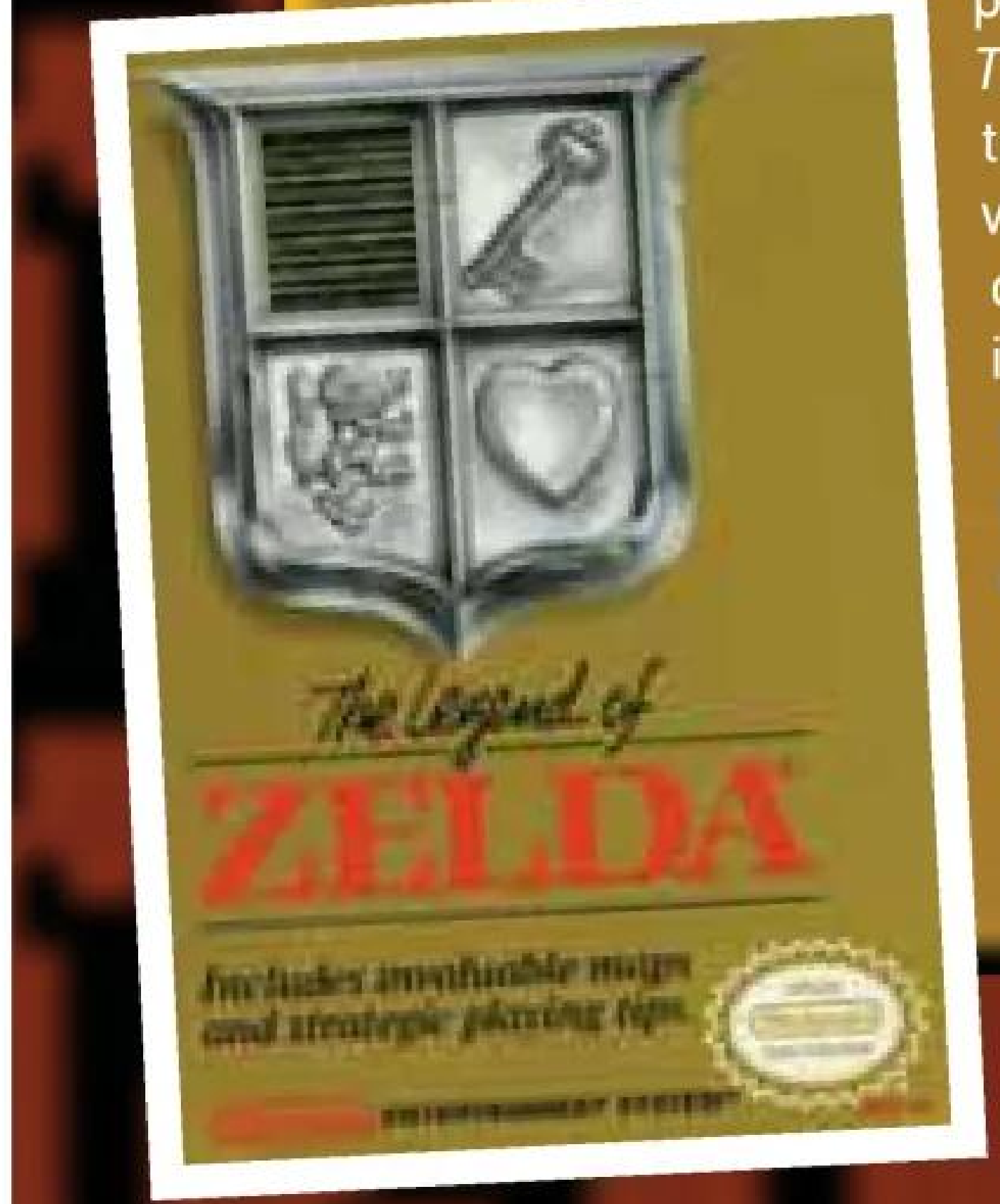
The first official release of the game was titled *The Hyrule Fantasy: Zelda No Densetsu* and was a launch title for the Famicom Disk System. This release used the extra capabilities in the FDS to play sounds not present in the NES cartridge version. It also used the microphone built in to the second controller of the Famicom. Blowing into it was a secret way to kill the sound-sensitive Pols Voice enemy, which was technically impossible on the standard NES.

ZELDA NO DENSETSU: TEIKYOU CHARUMERA (1986)

Made to promote Myojo Foods' charumera noodles, this special release of the Famicom Disk System game is identified by a different label design and is considered a rare Famicom collector's item, selling for around £180 in Japanese retro stores.

NINTENDO ENTERTAINMENT SYSTEM (1987)

As well as translating the game into English, the US and European release of *The Legend Of Zelda* was the first to arrive on cartridge. Though the Famicom Disk System had been introduced to reduce the cost of ROMs, the add-on never made it outside Japan so Nintendo used a new type of chip. The MMC1 (Memory Management Controller) used bank-switching to make bigger games possible and allowed *The Legend Of Zelda* to be released worldwide. And boy did Nintendo milk it, releasing the game on a special gold cartridge and cutting a window into the packaging so that everyone could see for themselves. Classy.

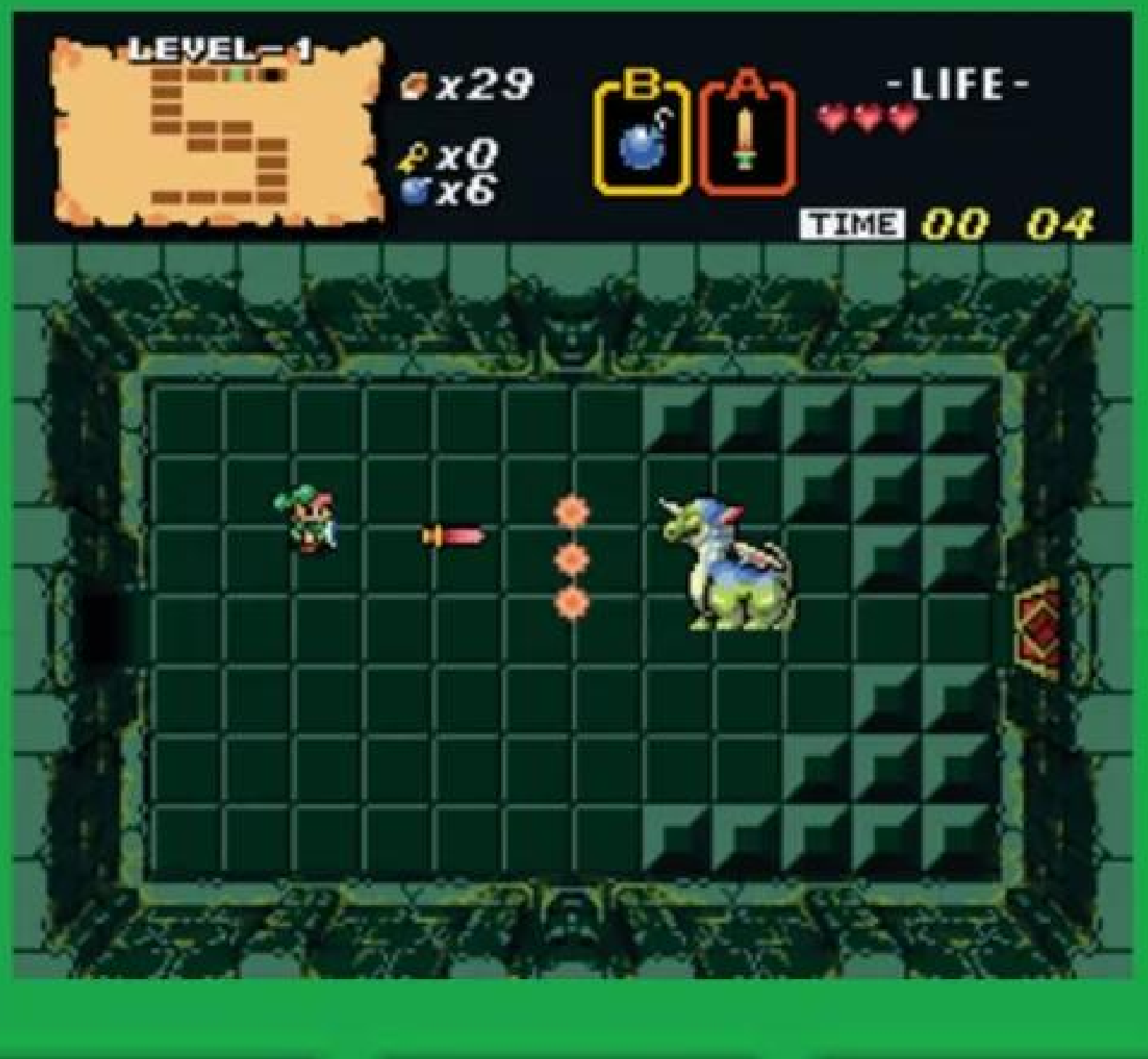


FAMICOM CARTRIDGE (1994)

Zelda eventually got its Japanese cartridge release in 1994, eight years after the disk release and a staggering eleven years after the launch of the Famicom console. The game is virtually the same except that it's renamed *Zelda No Densetsu 1*, given that the second, third and even fourth *Zelda* games had been released by 1994.

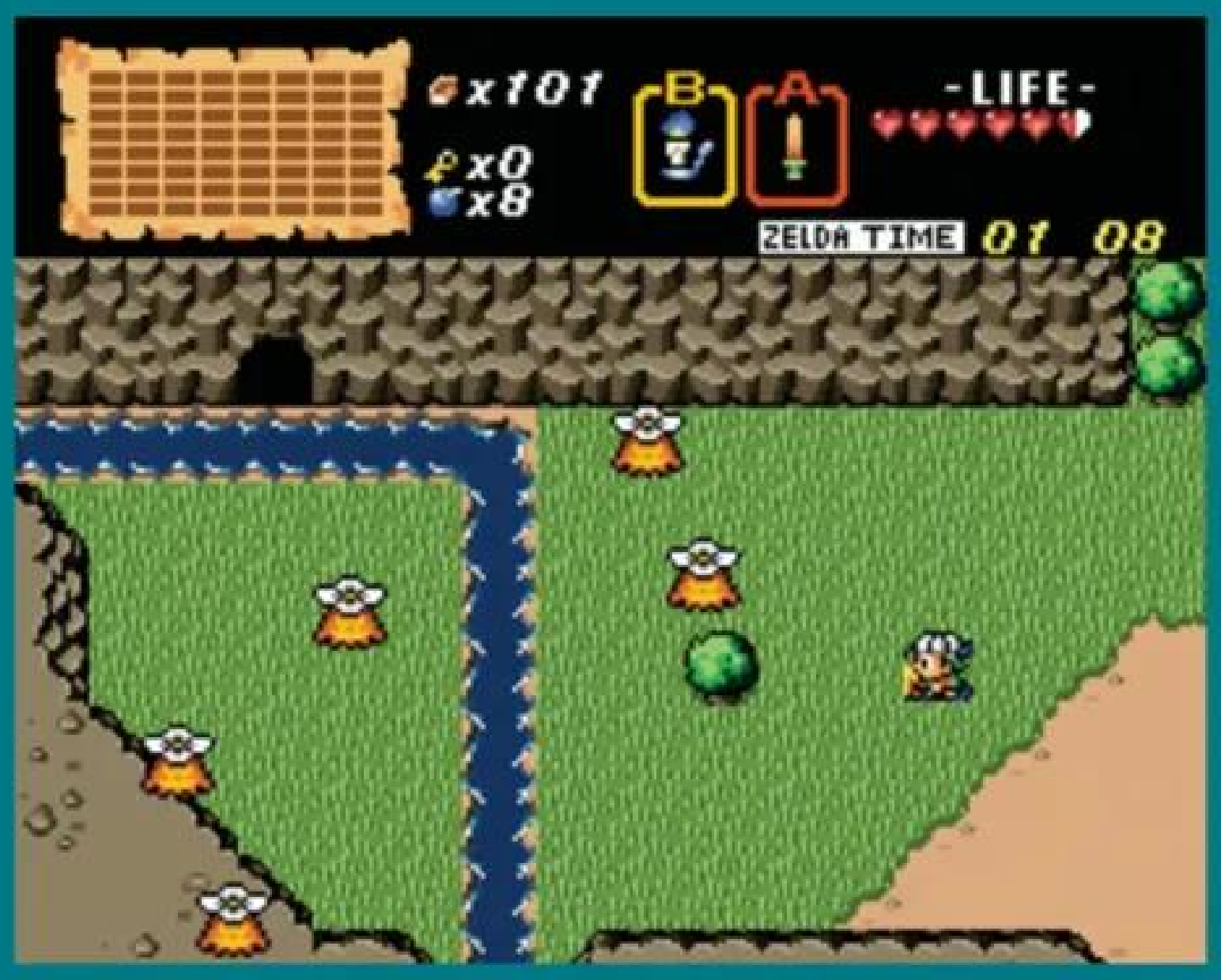
BS ZELDA NO DENSETSU (1995)

A 16-bit remake of the original *Zelda*, broadcast on the Super Famicom's Satellaview add-on between August 1995 and January 1997. As well as the advanced graphics, *BS Zelda No Densetsu* also made use of the hardware's SoundLink feature to provide a live narration throughout the broadcast quest.



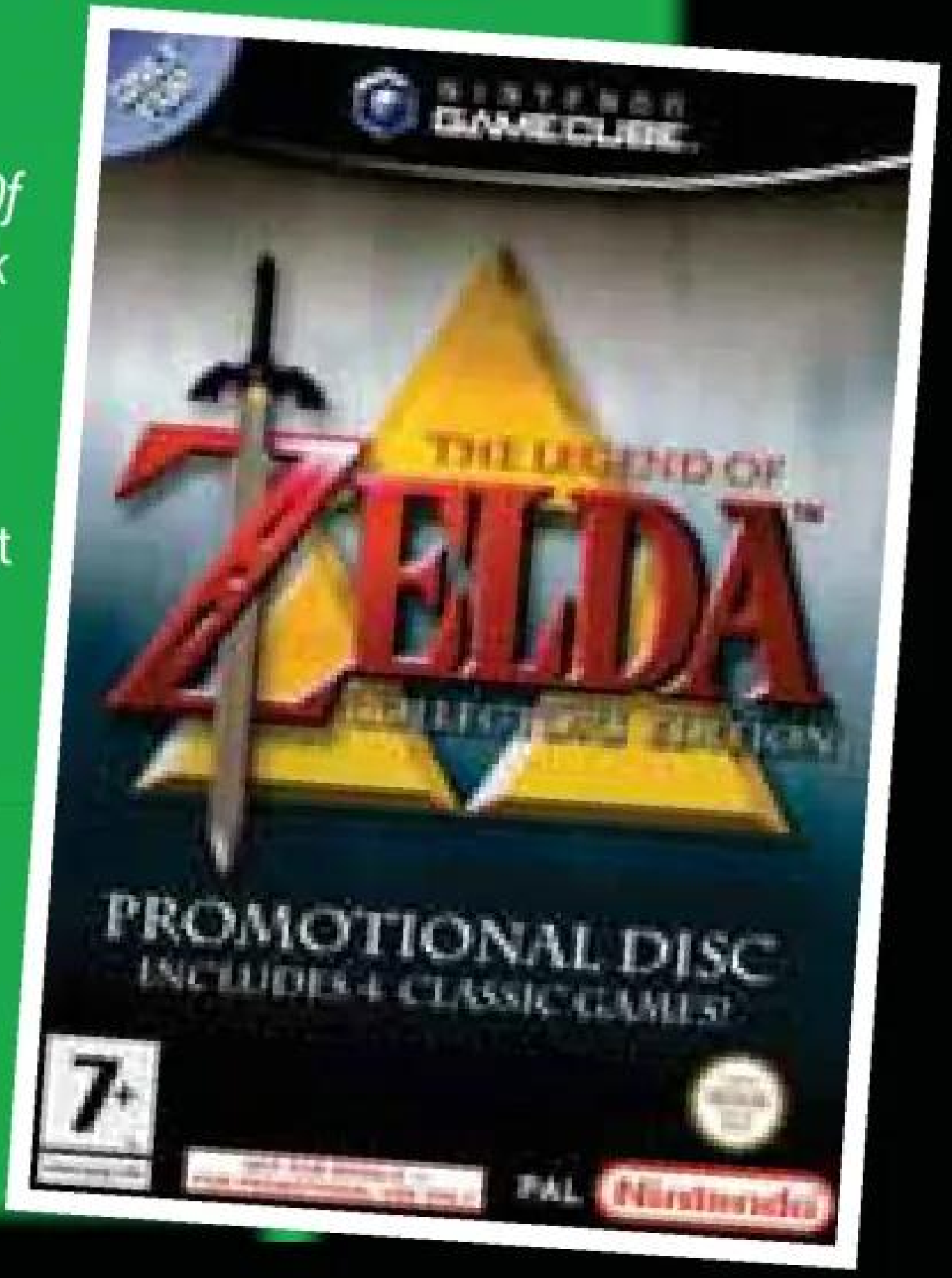
BS ZELDA NO DENSETSU MAP 2 (1996)

Basically the same game but based on the second quest from *The Legend Of Zelda*, this *BS Zelda* is much more elusive and was broadcast one time only in March 1996.



THE LEGEND OF ZELDA: COLLECTOR'S EDITION (2003)

A promotional GameCube disc that was never officially sold but given away to Nintendo customers to promote the upcoming release of *The Wind Waker*. The disc includes emulated versions of *Zelda II*, *Ocarina Of Time*, *Majora's Mask* and, of course, *The Legend Of Zelda*, which featured a new translation that corrected some of the 'Engrish' in the original NES version, as well as changing the name of Gannon to the more canonical Ganon.



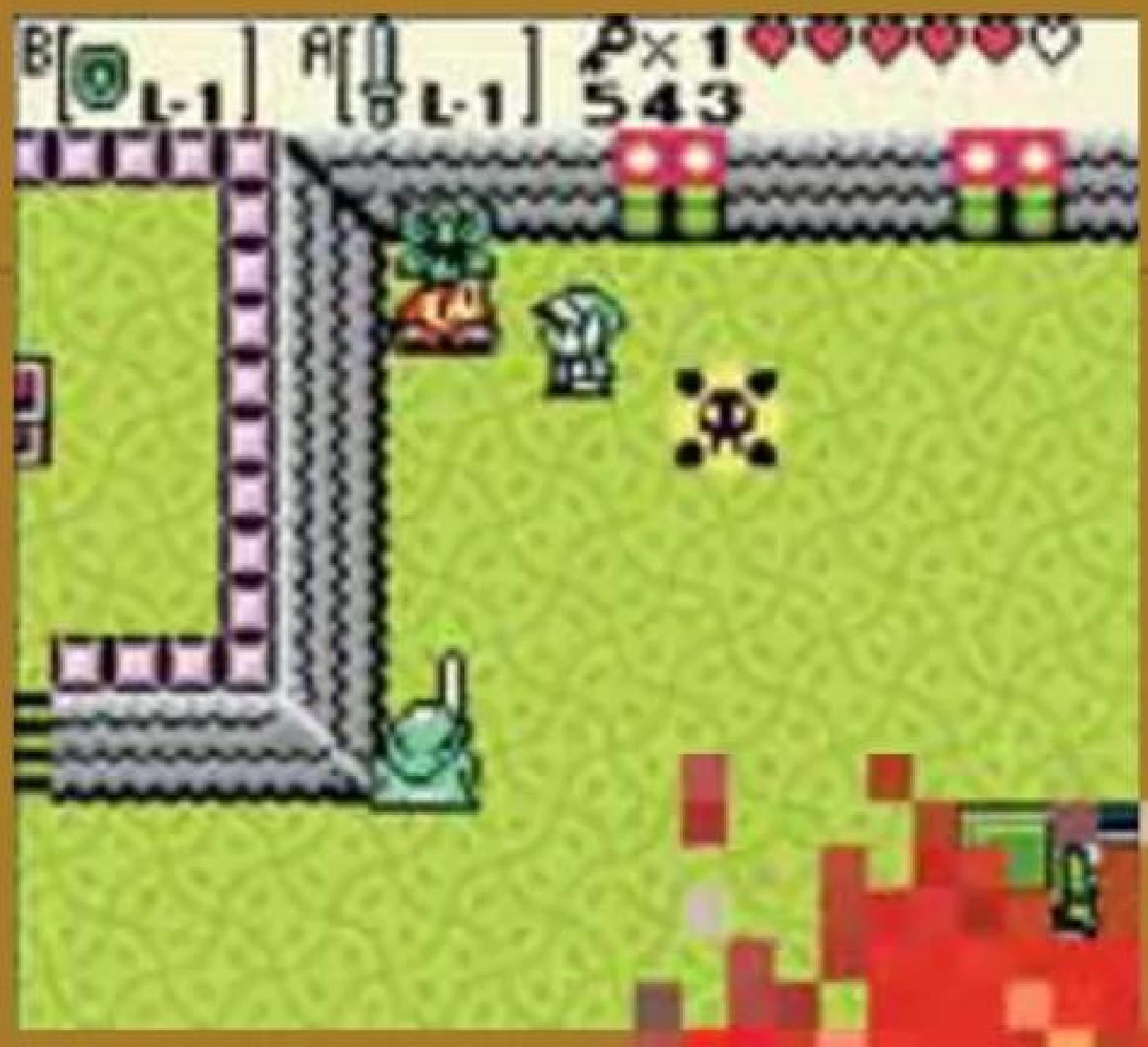
VIRTUAL CONSOLE (2006)

The Legend Of Zelda was one of the first big Nintendo games to be distributed on the Wii's Virtual Console service. Sadly, the European version ran in 50Hz as part of Nintendo's ludicrous policy of remaining faithful to the version each territory remembers, despite the fact that it used the updated 2003 translation. It is now delisted.

Welcome to the Wii Shop Channel
The Wii Shop Channel is Now Open!
Start Shopping

GAME BOY COLOR REMAKE (2000, cancelled)

In 1999, Yoshi Okamoto of Capcom negotiated a deal to develop six new *Zelda* titles for the Game Boy Color. Flagship worked on the remake for a year but encountered a number of problems. One was that the GBC's resolution was too different to that of the NES, meaning the game had to be redrawn to fit the more narrow screen, and another was that the team wanted to rebalance the game to make it less difficult. The remake was eventually scrapped in 2000 as Flagship changed direction. At Miyamoto's request, the studio started work on three interlinked games in the 'Triforce' series, named *Mystical Seed Of Wisdom*, *Mystical Seed Of Power* and *Mystical Seed Of Courage*. This idea proved too ambitious, however, and had to be downgraded to the two games that were eventually released: *Oracle Of Ages* and *Oracle Of Seasons*. The latter evolved directly from *Mystical Seed Of Power*, which was developed off the back of the remake project, and you can still find similarities between *Seasons* and *The Legend Of Zelda* today.



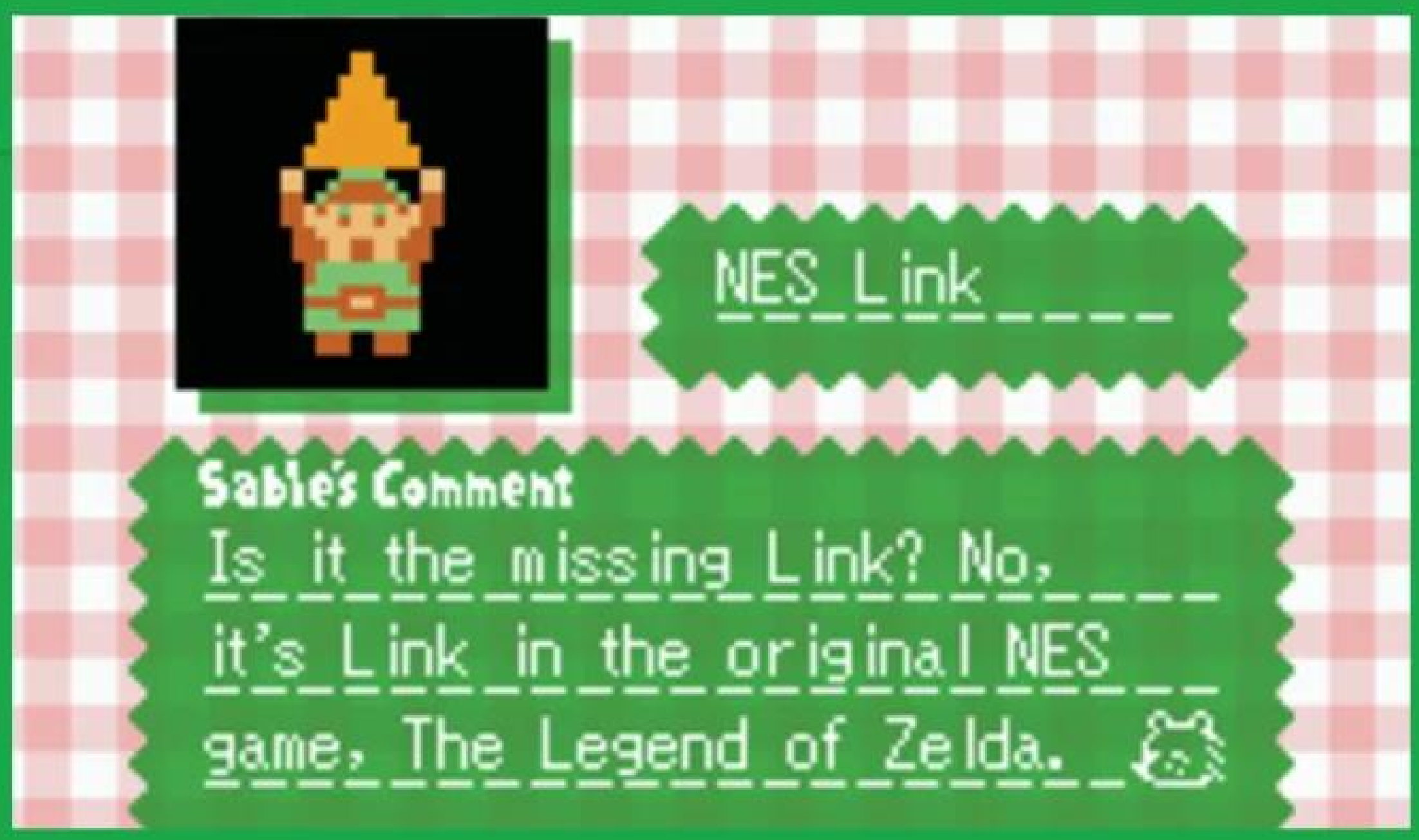
THE LEGEND OF ZELDA: MASTERPIECE DEMO (2008)

Nintendo's all-star Wii fighting game *Super Smash Bros Brawl* contains a Vault section that celebrates the history of the playable characters that appear in the game, and the Vault includes a selection of Masterpieces – timed demos of old games so that you can go hands-on with history yourself. With five *Zelda* characters, three of them different versions of Link, appearing in *Brawl*, it's only natural that *The Legend Of Zelda* appears on the disc.

MASTERPIECES
Ice Climber

ANIMAL CROSSING (2001)

Both the Nintendo 64 and GameCube editions of *Animal Crossing* allowed players to enjoy a series of NES games in their virtual homes. *The Legend Of Zelda* was one of those games although, weirdly, it was buried in the code and couldn't be accessed without using cheat devices.


NES Link

Sable's Comment

Is it the missing Link? No, it's Link in the original NES game, The Legend of Zelda.

NES CLASSICS: THE LEGEND OF ZELDA (2004)

In 2004 Nintendo released a series of Game Boy Advance games called Famicom Minis, which re-created favourite Famicom games on yellow cartridges that came packaged in tiny, cute boxes. When the series came to Europe and America, it was re-envisioned to evoke nostalgia for the NES and sadly lost the cute boxes, but we did get some cool NES games. This version was reformatted for the GBA's wide screen and featured the same new translation as the GameCube remake.

GAME BOY ADVANCE
NES CLASSICS
The Legend of
ZELDA
Nintendo
3+

3D CLASSICS EDITION (2012)

When the 3DS was first shown off at E3 2010, one of the tech demos was a series of 'Classic Games' redrawn to take advantage of the 3D display, and one of the games in that showreel was *The Legend Of Zelda*. Nintendo has since confirmed plans to sell downloadable '3D Classics' through the 3DS's eShop service, starting with *3D Excitebike*. *The Legend Of Zelda* hasn't officially been confirmed, but given that *Ocarina Of Time* has been remade for the system, and that Shigeru Miyamoto has expressed interest in giving similar treatment to *A Link To The Past*, it's easy to assume that the original *Zelda* will appear in 3D pretty soon.

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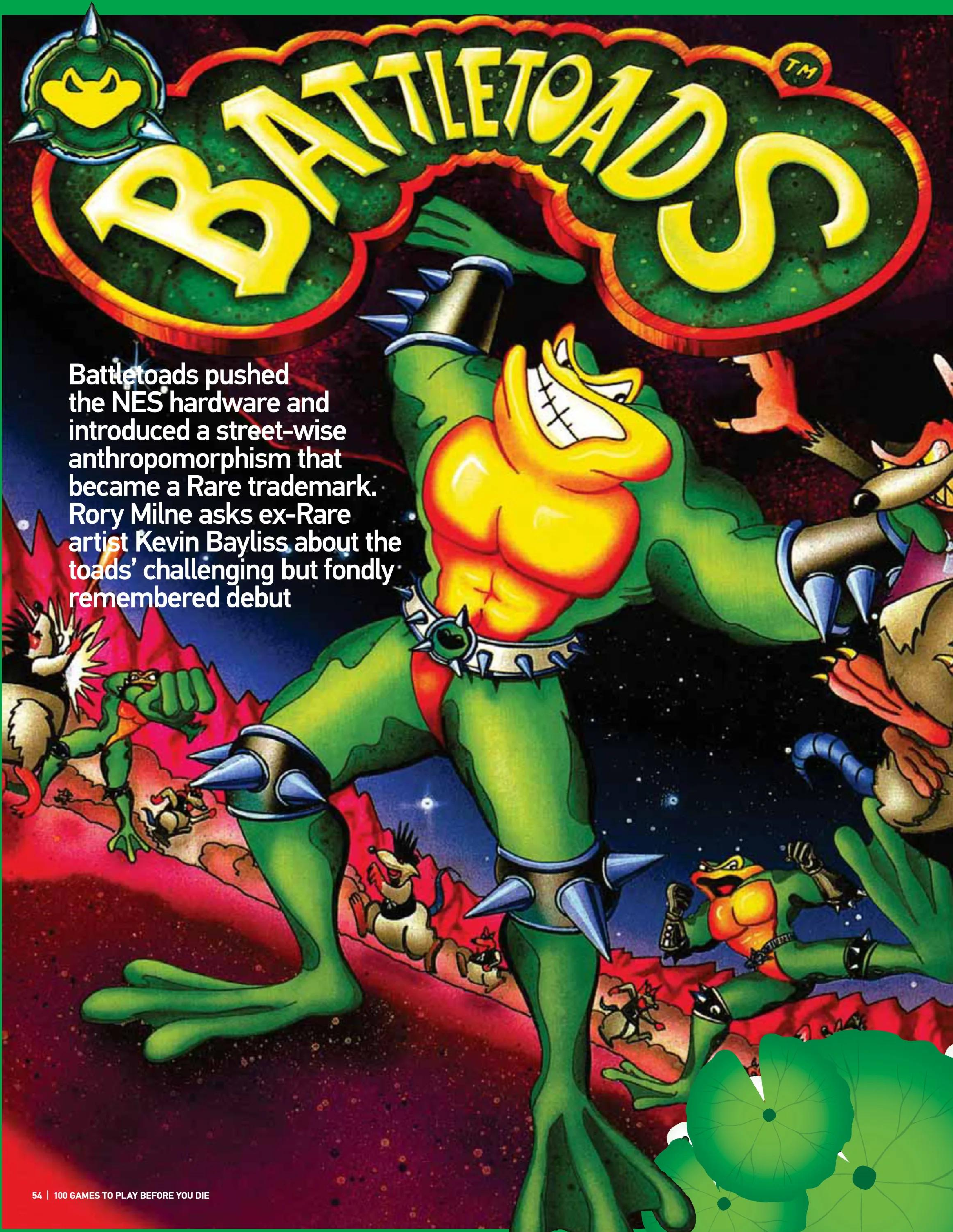
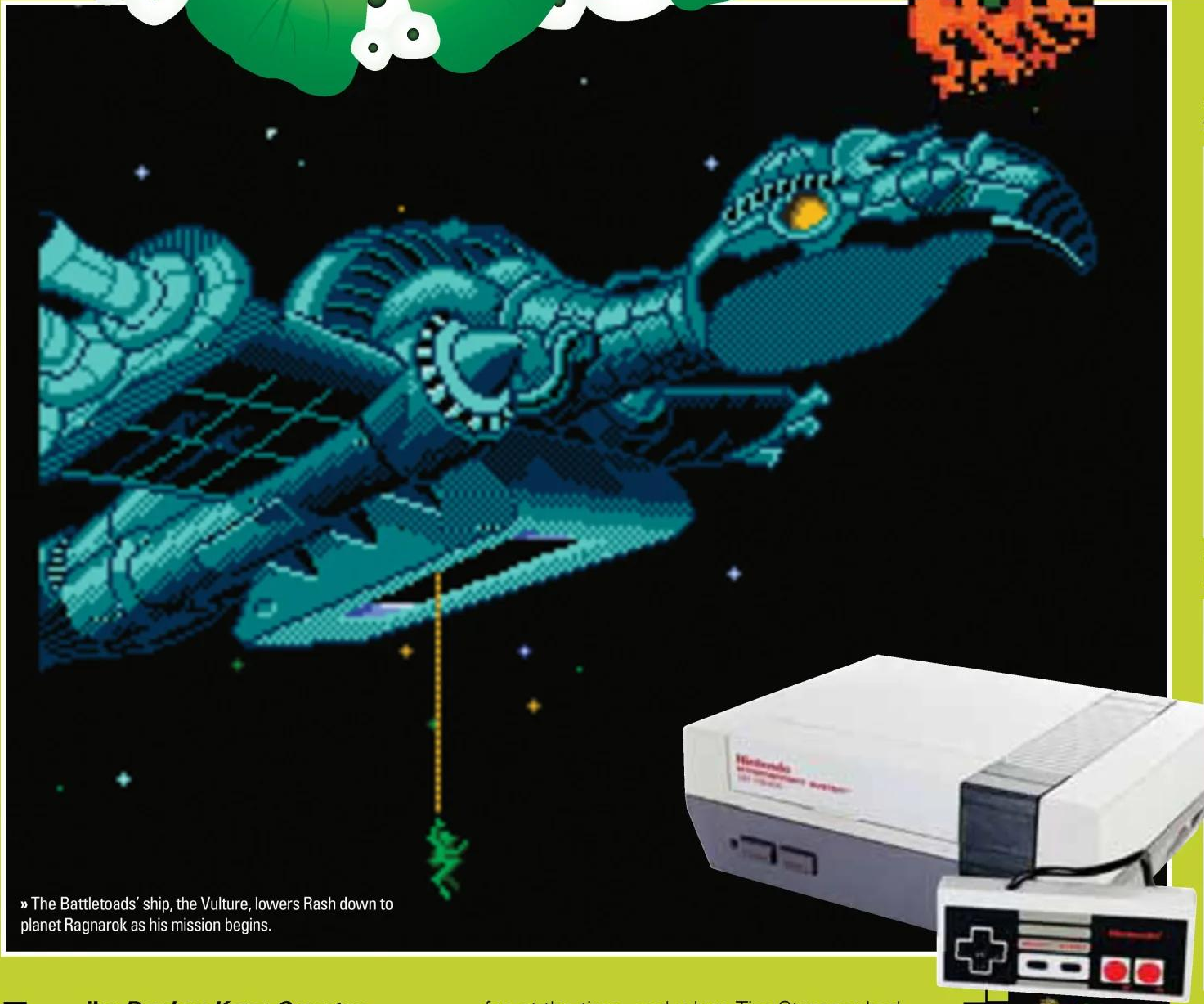
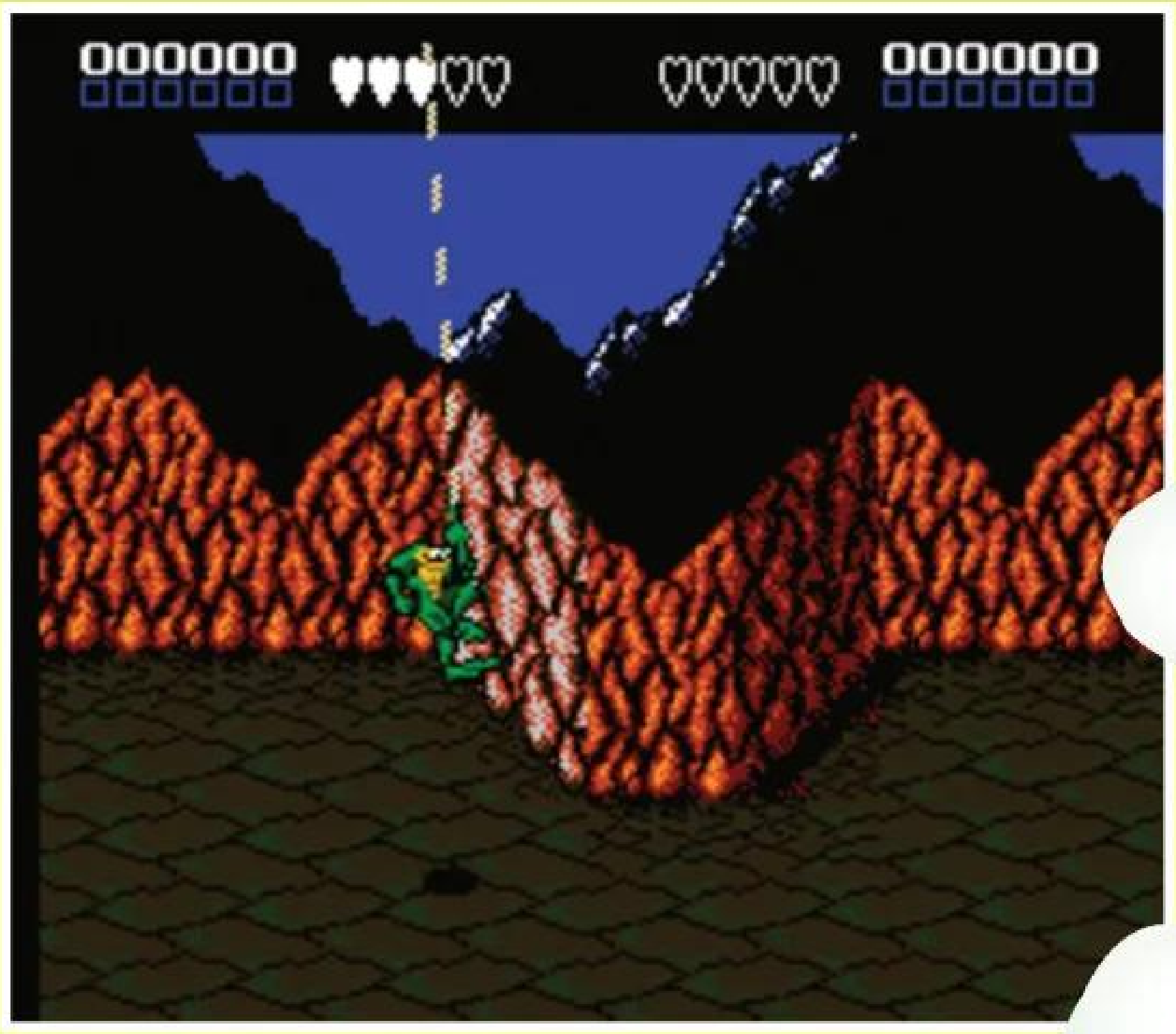


Battletoads pushed the NES hardware and introduced a street-wise anthropomorphism that became a Rare trademark. Rory Milne asks ex-Rare artist Kevin Bayliss about the toads' challenging but fondly remembered debut

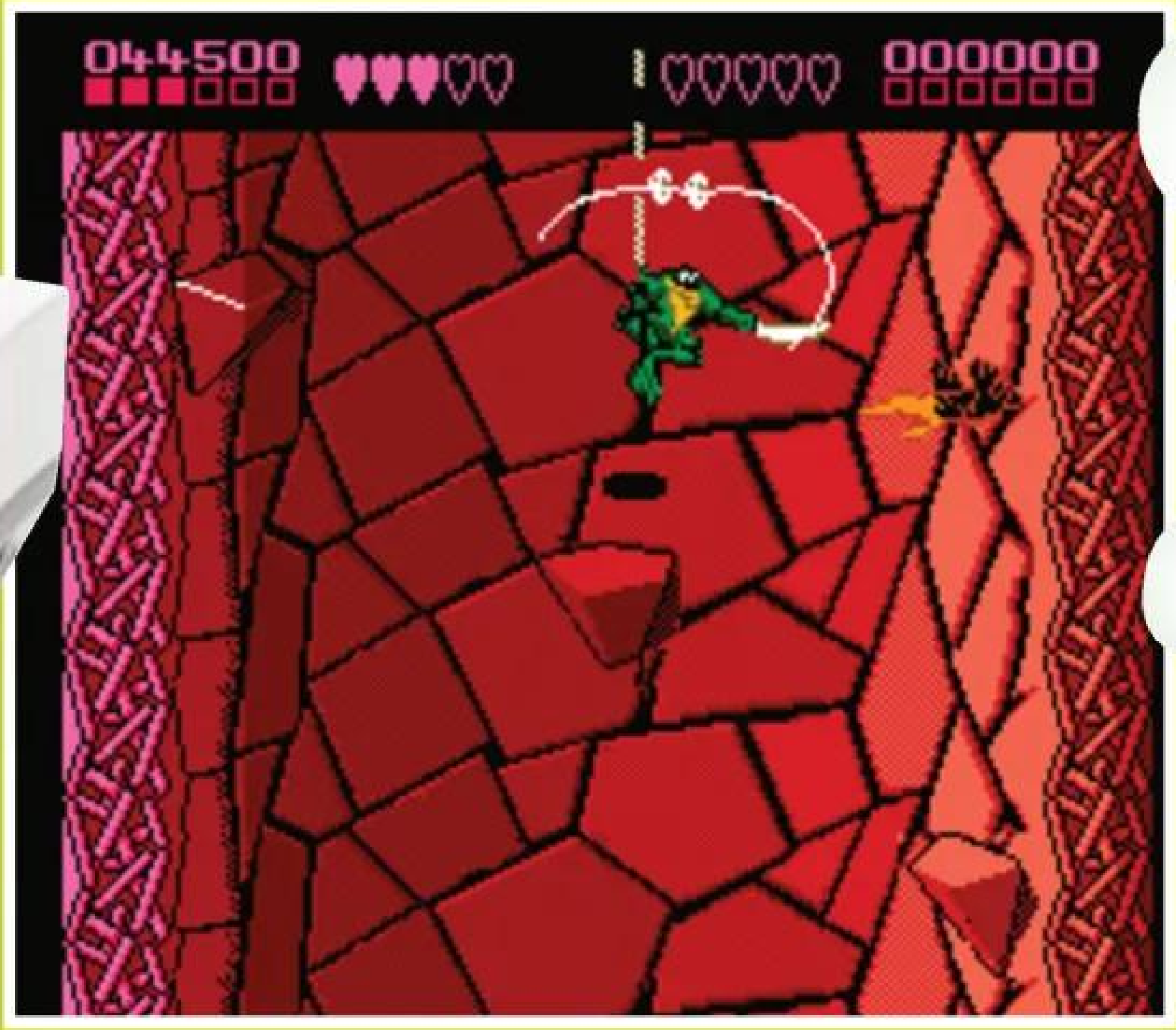


» The Battletoads' ship, the Vulture, lowers Rash down to planet Ragnarok as his mission begins.

» Battletoad Rash swings into action as he descends towards the Dark Queen's planet.



» It's "Bye, Bye, Blackbird!" as toad trumps raven in a sheer vertical drop.



Like *Donkey Kong Country, Battletoads* marked a pivotal point in Rare's journey. In the same way that *Donkey Kong Country* was Rare's last hurrah for the Super Nintendo – although not its last Super Nintendo title – *Battletoads* was Rare's swansong of sorts for the NES – although not its final NES effort. Both games were, though, the culmination of everything that Rare learned about the intimate workings of Nintendo's earliest consoles. And while Rare's later SNES and NES games innovated in terms of gameplay, they had little scope to improve technically on their iconic predecessors or, indeed, to squeeze more into their carts.

"Yeah, it was really *full*, if you know what I mean," agrees Kevin Bayliss, *Battletoads*' co-designer, "there wasn't a lot more we could cram in. We were constantly measuring the size of the code and graphics to ensure that it would fit on the cartridge that we had aimed it to be released on. *Battletoads* was really rammed in there!"

Of course, long before getting the game to fit its cartridge, concepts and characters would have to be developed, which was an aspect of *Battletoads*' design that would be very much influenced by the family-friendly guidelines that Rare worked to at the time. "Sideways scrolling arcade-style games were very popular around the late Eighties and early Nineties," Kevin remembers, "and as Rare had previous experience with that genre with some of the Ultimate titles, we decided to try one for NES. I was a huge *Double Dragon* fan at the time, and when Tim Stamper had okayed the idea of putting together a beat-'em-up style game he asked me to come up with some characters for it. Rare wasn't really known for making violent games, and Nintendo had a policy for limiting violence, ensuring that certain things were portrayed in a certain way. So we took the more fun-styled cartoon approach, rather than the more graphic and serious look of some of the other popular beat-'em-up games of the time. Enter the Battletoads!"

With a genre and direction chosen, Kevin got on with the task of developing the characters that would inhabit the *Battletoads* world ready for Tim to digitise and pass on to the game's coder Mark Betteridge, as Kevin explains. "I was heavily involved in creating the character designs, based on ideas that one of our writers, Guy Miller, was putting together working alongside Tim. I think apart from one or two, the designs of the characters were all drawn by me. I was mainly responsible for concept artwork and a little in-game artwork. I gave Tim sketches each day, and he'd then squeeze my designs into sprites. At that time, we were still tracing sketches on grids, and boxing sprites into as few characters as possible. You can recognise Tim's style when you look at how the toads, enemies and props compare to the Ultimate games. He was very clever at making graphics fit within a certain memory capacity due to his experience with Ultimate; there was an art to it I guess. We thought it would be fun to enlarge the fists upon impact when players hit their opponents. This really seemed to work on the tiny sprite characters, and so we expanded upon that by enhancing their limbs with power-ups, which gave the game a unique look, and it of course also became one of the main features of the characters themselves. Backgrounds were also heavily put together by Tim, as he was far more experienced in putting that kind of stuff together. He worked very closely with Mark Betteridge – the software genius behind a lot of Rare's earlier titles – while I churned out concept work, logos and front-end story graphics."

Having established a production line for *Battletoads*' visual components, the small team could start developing the game's

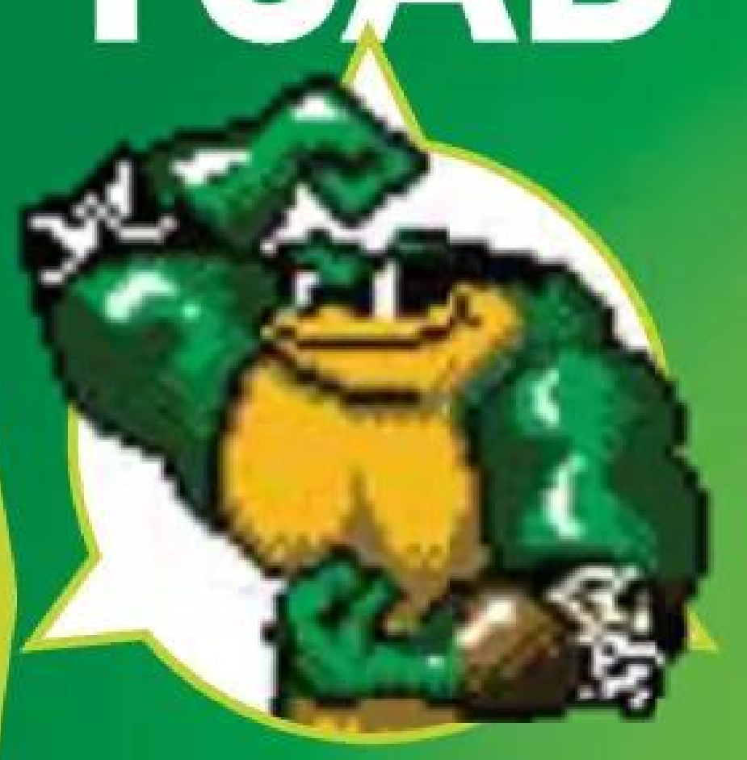
▶

YEAH! LET'S GET 'EM BACK

IN THE KNOW

- » **PUBLISHER:** NINTENDO
- » **DEVELOPER:** RARE
- » **RELEASED:** 1991
- » **PLATFORM:** VARIOUS
- » **GENRE:** BEAT-'EM-UP / PLATFORMER

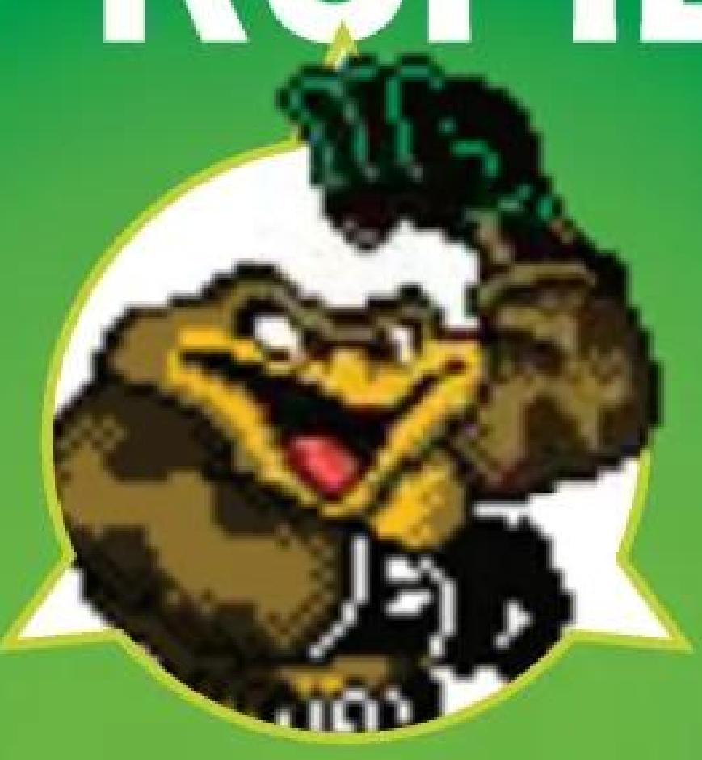
TOAD PROFILES



NAME: Rash

STYLE:
Too cool for school

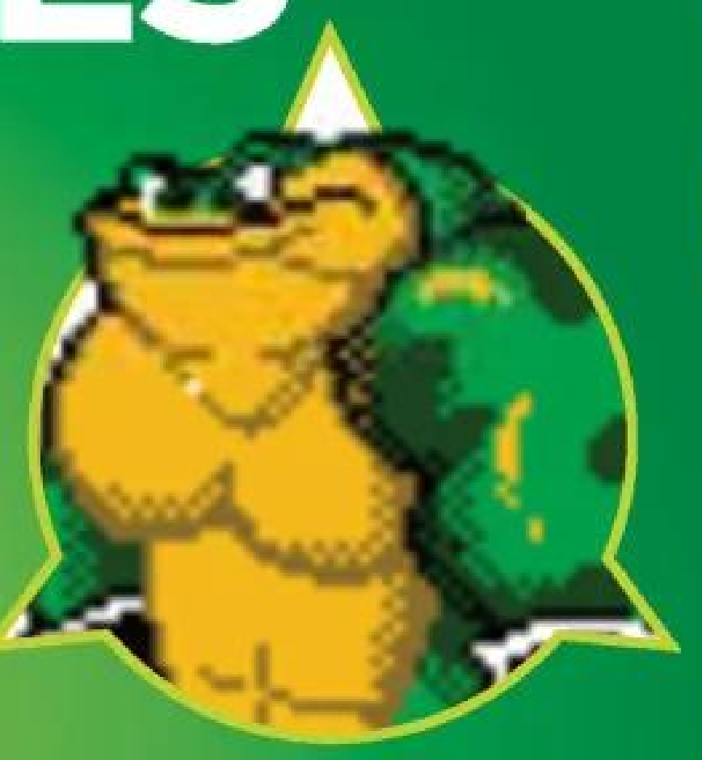
■ A flamboyant extrovert, Rash has fast fighting moves to match his fast mouth. He may be the smallest of the toads, but that helps to make him the most agile.



NAME: Zitz

STYLE:
Brains over brawn

■ Leader of the Battletoads, Zitz is a tactical genius. He isn't as fast as Rash or as tough as Pimple, but he's good with gadgets – think James Bond with warts.



NAME: Pimple

STYLE:
Bull in a china shop

■ He's not the brightest, but Pimple's brute force comes in handy when the toads go into battle. Plus, he's dating a Princess, so he must be doing something right.

BATTLETOADS HISTORY

A quick overview of the series. How many have you played?

BATTLETOADS

NES 1991

■ It all began on the NES, of course, but the brawling, platforming and multi-genre stages of the Battletoads' first demanding outing were ported to various other consoles as well as the Amiga.

BATTLETOADS

GAME BOY 1991

■ Although released just after the NES original, Game Boy *Battletoads* was pretty much a completely different game. A few NES stages survived in adapted form, but the title essentially went its own way.

BATTLETOADS & DOUBLE DRAGON: THE ULTIMATE TEAM

GAME BOY 1993

■ The Battletoads teamed up with the characters that inspired their creation for this sequel, and while it spanned several genres – much as its predecessor had done – the follow-up offered a few more sustained beat-'em-up sequences.

BATTLETOADS IN BATTLEMANIACS

SNES 1993

■ Although an original game, *Battlemaniacs* was heavily inspired by aspects of the first *Battletoads* title. Its visuals, plot and bosses were new, however, and its gameplay was reworked to show off the Super Nintendo hardware.

BATTLETOADS IN RAGNAROK'S WORLD

GAME BOY 1993

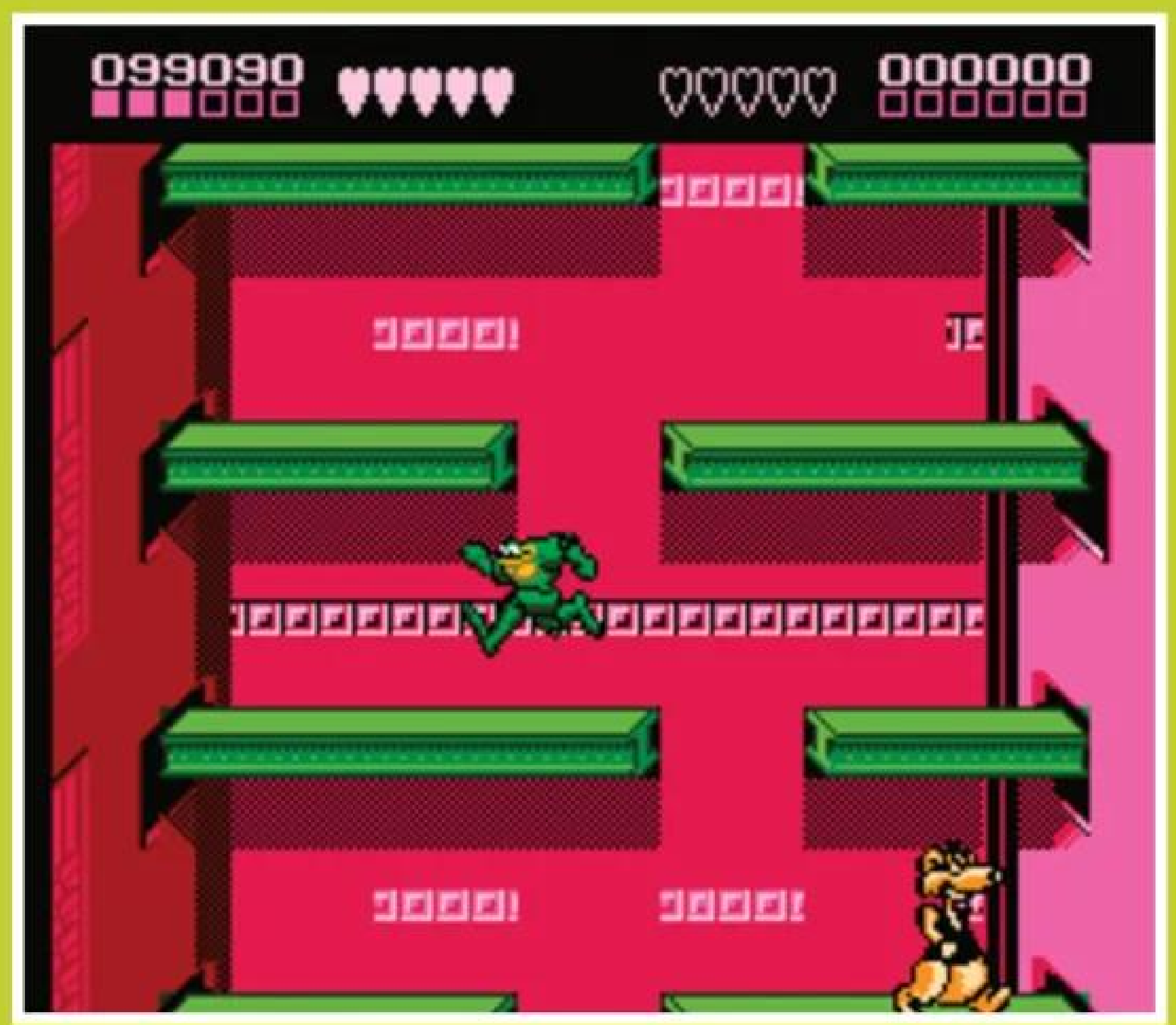
■ Confusingly, this impressive system exclusive delivered exactly what might have been expected of Game Boy *Battletoads* – a stripped down version of the NES original with graphical concessions and fewer levels and bosses.

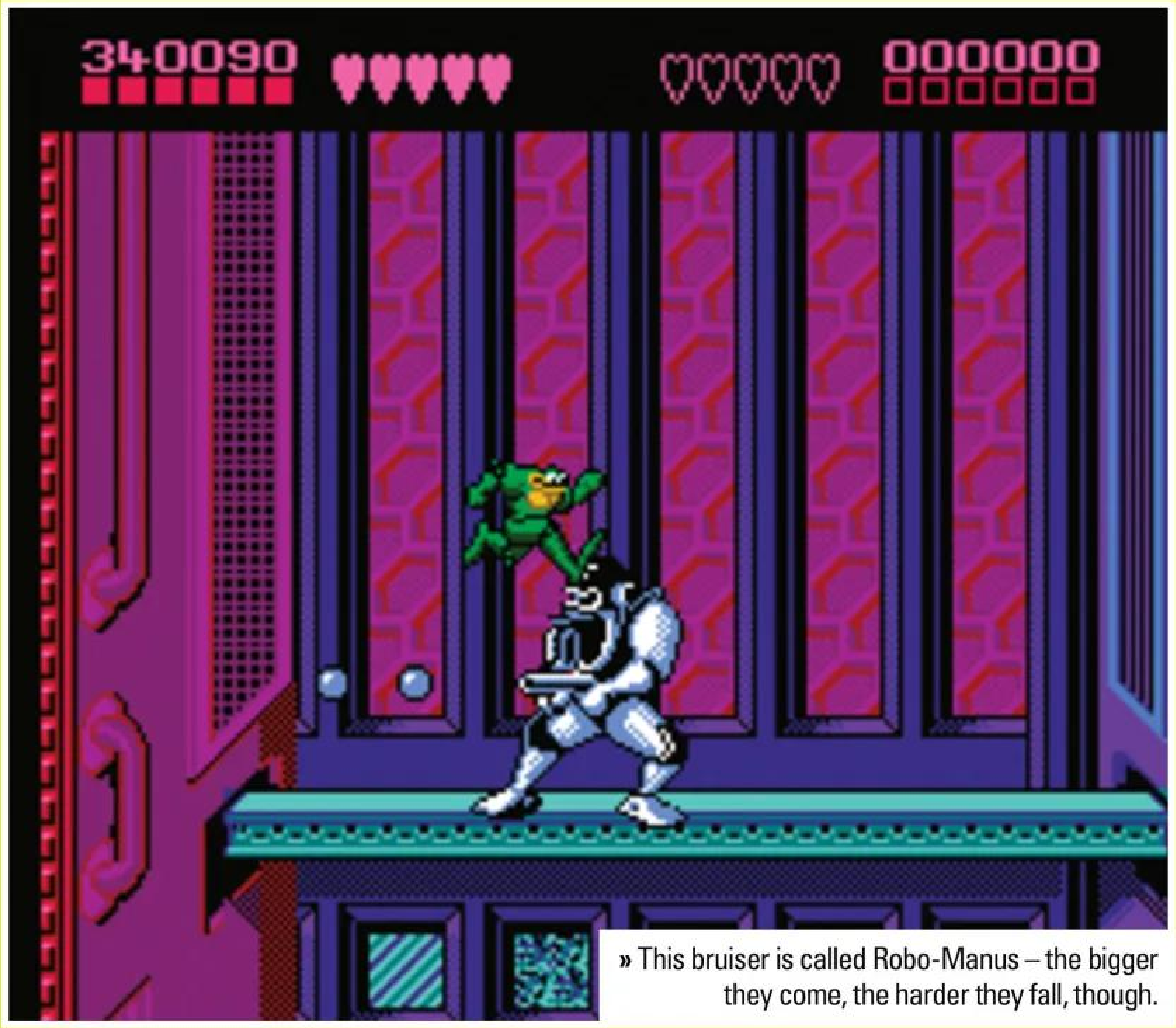
BATTLETOADS

ARCADE 1994

■ *Battletoads* undeservedly flopped at the arcades, despite being a high-quality scrolling fighter that refined the franchise's formula. The coin-op is predictably the best-looking *Battletoads* title released and favours brawling over other genres.

» An actual rat race, as Rash races a ratty opponent to defuse a bomb.





» This bruiser is called Robo-Manus – the bigger they come, the harder they fall, though.

▶ design and storyline. "We all worked together on that team on a day-to-day basis," Kevin recalls, "but when it came to the game design and concepts for levels, that was really Tim and Mark. The game design was the first thing that was tried and tested. Story came afterwards. But once we had the first few levels rolling along and playing nicely, we continued to expand upon the story too. This story then gave us other ideas to work into the game, so we were soon developing the story and the game simultaneously."

The structure the team had put in place allowed the *Battletoads* project to quickly gain momentum, and a game-defining decision was soon made on the title's difficulty. "Mark had developed some editors for creating levels, and I think that Tim worked with him on putting those together," notes Kevin, "I remember that a lot of work went into making it seriously hard and precise. Some of it was crazy hard but that's the way it was intended to be; extremely challenging. I would often hear Mark scream when he was testing his own software if he failed to get past his own levels, but I don't think he made it *too* hard. I guess we just wanted value for money, and for the game to last. We'd always try to vary the levels so that you got a break from one particular style or genre within the game. It made it more refreshing to play over periods of time and a lot more challenging in general. The story would often help to play a part in creating those subgenres and added to the variation. I remember watching Tim draw all of the sections of the Dark Queen's tower, which Mark cleverly animated to achieve the 3D effect. It worked really well, and I learned a lot of tricks from Tim by watching him create those kinds of effects. I thought it looked amazing when I saw it working."

As *Battletoads*' visuals, design and gameplay evolved, another equally important aspect of the game was addressed – one that required an additional team member, as Kevin recollects. "My friend Dave Wise would come up with new music for each level – as far as I remember, that was pretty much the way it went for most games. The levels didn't really come to life until we had music and effects. I remember always looking forward to Dave appearing with a new disc that held the music to the next level. Once that was incorporated we'd sometimes switch the odd level music around to a different level, because sometimes tunes felt *right* on other levels. But usually, Dave would go away after looking at a level's graphics and a brief demo of the gameplay, and then he'd write a piece for the level. A lot of the sound effects were created by Mark – using some software he created to generate sounds."

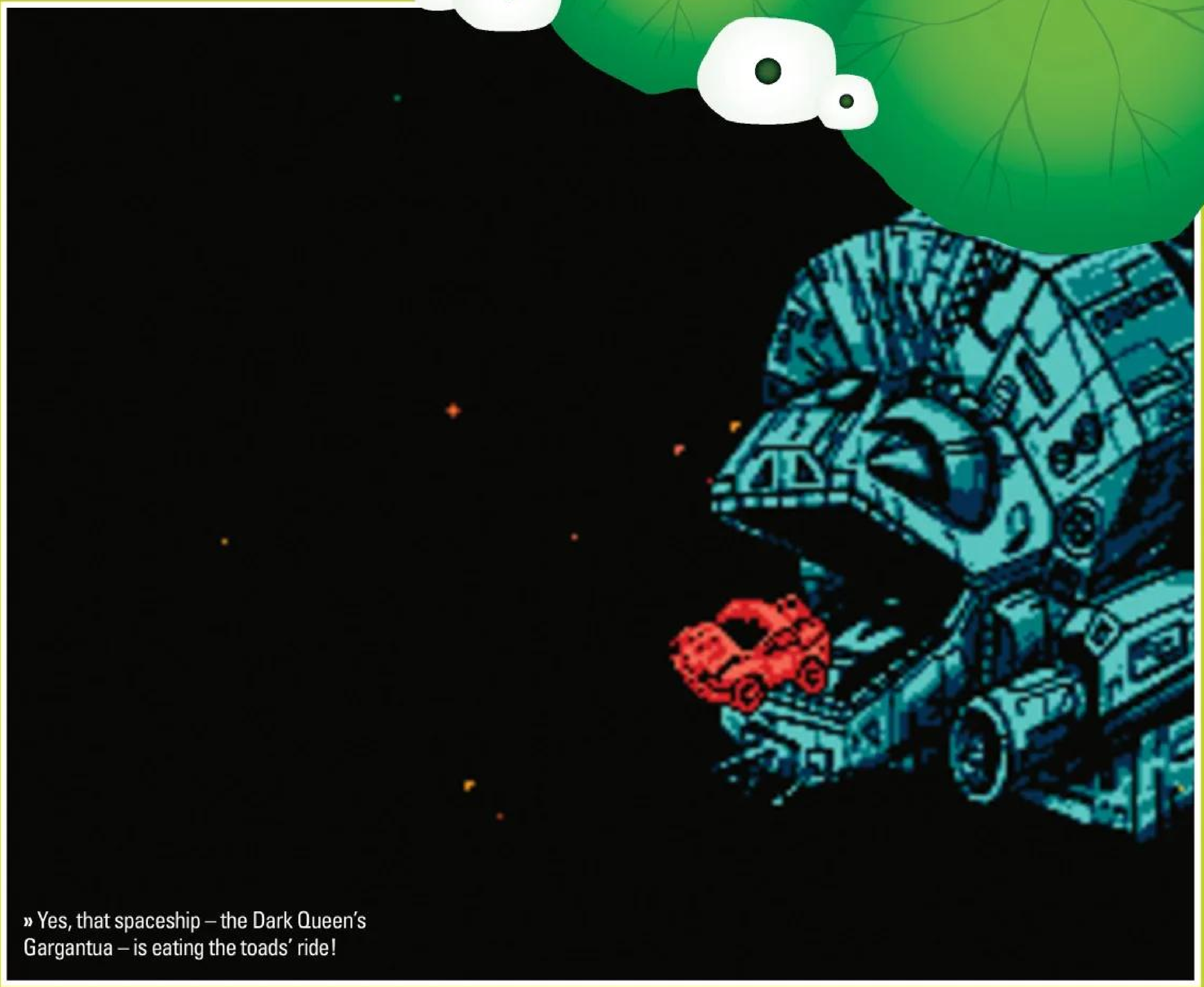
Serious hours were being put in to *Battletoads* and the team's collective efforts were reaching fruition, and so work was started on the title's box art, but thought was also being given to documenting the game's visuals for future reference and to help with the marketing of the game. "I designed the box artwork, but Tim airbrushed and produced it." Kevin reveals, "It was the second design. I did one with the three toads on the front up-close, but it went off to focus groups and it didn't grab the kids' attention, so we did a redesign. I inked up a picture, and as Tim was so good

DEVELOPER HIGHLIGHTS

DONKEY KONG COUNTRY (PICTURED)
SYSTEM: VARIOUS
YEAR: 1994

GOLDENEYE 007
SYSTEM: N64
YEAR: 1997

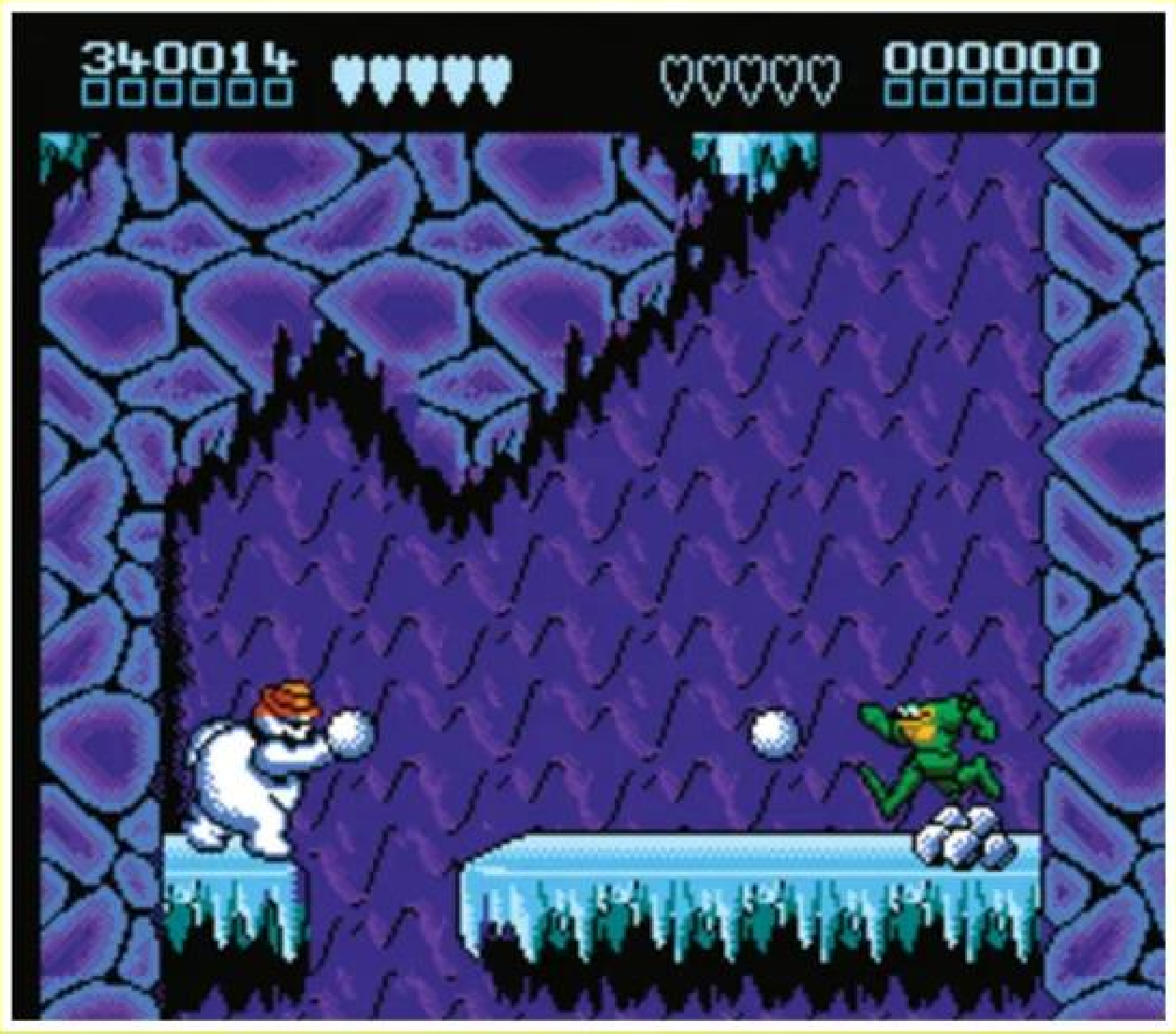
BANJO-KAZOOIE
SYSTEM: N64
YEAR: 1998



» Yes, that spaceship – the Dark Queen's Gargantua – is eating the toads' ride!

with the airbrush he did a fantastic job of the one we ended up with. We also made a style guide containing all of the characters within the game, we wanted as much of the concept illustrated on paper as possible. The style guides were used for reference when working with Nintendo. Putting them together also allowed us to present visually to the companies that became involved in marketing. I was busy working on the style guide and some of the other graphics for the game, but I wouldn't say that I spent anywhere near as many hours working on the game as Mark did. As usual, he practically lived at Rare when he worked on the game and got really into the thick of it."

Of course, before marketing *Battletoads*, the task of in-house testing the finished product remained, with the general feeling at Rare being that they had produced a title that was tough but fair. "I think Mark always wanted it to be difficult," Kevin admits, "It was never impossible, but always just required practice and of course some skill. The NES controllers were bulletproof little pads that were actually really responsive and could take some serious shit, but the game was tested on many controllers to make sure it was possible to play *right*, and it was, but you had to put in the practice. As a fighting game enthusiast I preferred the brawling levels. I could never complete it, but then there's nothing worse than a game that is too easy!"



» A spirited game of snowballs? Nope, these icy spheres are deadly, so duck, toad!

On its release, the idea that *Battletoads* might be too easy was either skilfully concealed in the glowing reviews that the game received or, far more likely, was simply not considered. Just as importantly, the impressive sales that the title enjoyed confirmed that NES gamers' appreciation for *Battletoads* matched the fevered enthusiasm shown by the videogames press. Further games in the series were now a formality, but *Battletoads* would also have a second less obvious legacy. "*Battletoads* became a template in some way," Kevin reasons, "perhaps *Battletoads*, when you think about it, was a changing point for Rare, and a lot of the game's elements echo throughout many of the company's later titles. Eventually it became kind of a trademark I guess, and future Rare games were often varied in the same kind of way as *Battletoads*."

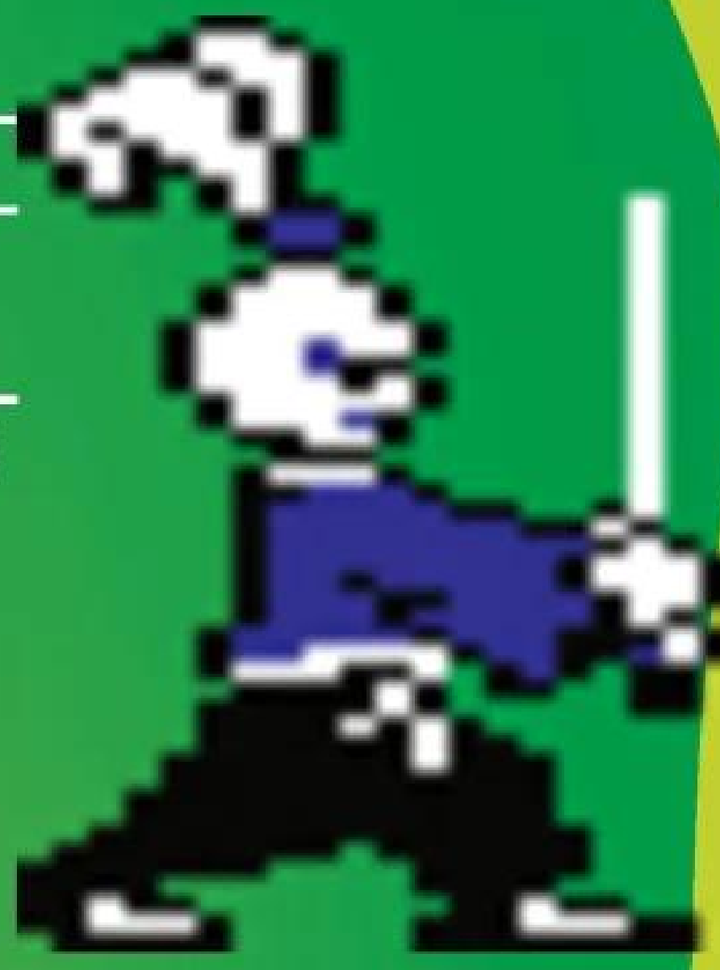
Battletoads may be far from a template for Rare's current output, but like many gamers, Kevin feels that the seminal scrolling brawler stands up against anything that Rare or anyone else was producing at the time. "Most of the games we produced were top quality," Kevin beams, "some titles were stronger than others, but we learned as the company grew about what people wanted in a game. We always, always tried to make sure they were just fun to play, and that they would give a challenge to anyone who picked them up. When I see *Battletoads*, I see a lot of game rammed into that NES cart, and compared to a lot of the other games that were out at the time it offered a lot more. It looked great, sounded and played fantastic and it set the path for more *Battletoads* games, which proved its success. It's definitely one I'm proud of being a part of." ✱

Many thanks to Kevin Bayliss for making this article possible.

ANTHROPOMORPHIC FIGHTERS

Other animals with distinctly un-animal-like behaviour

MIYAMOTO USAGI

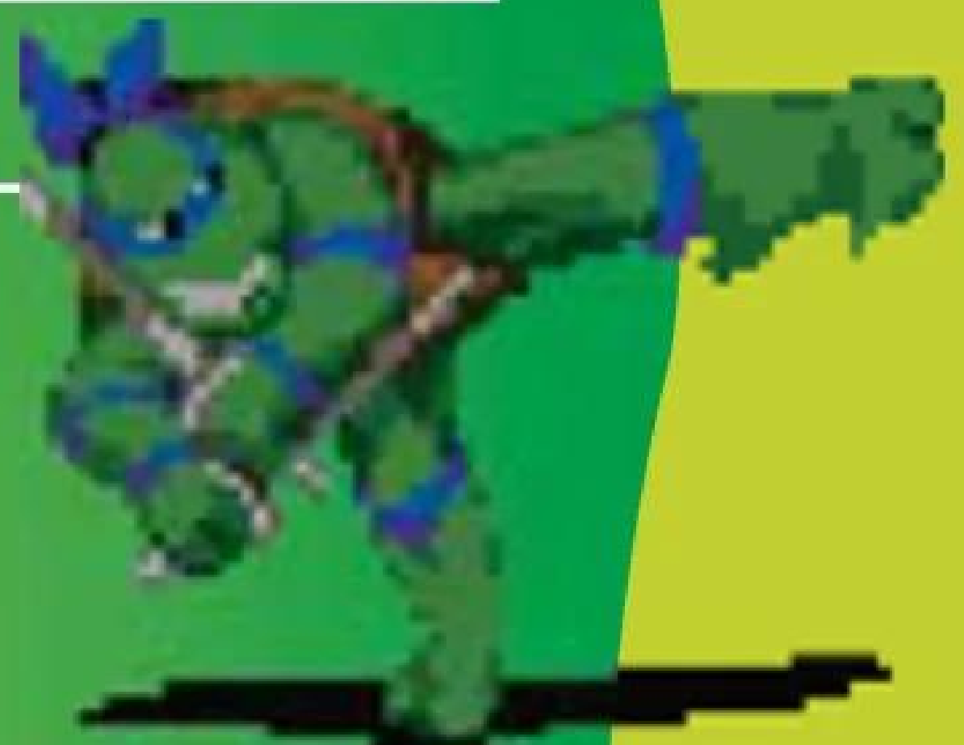


SPECIES: Rabbit

MEMORABLE APPEARANCE:
Samurai Warrior: The Battles Of Usagi Yojimbo

■ The creation of writer/artist Stan Sakai, Miyamoto Usagi appears in Dark Horse Comics' *Usagi Yojimbo* – which translates as "rabbit bodyguard". Usagi is a ronin who wanders ancient Japan on a warrior's pilgrimage. Beam Software skilfully adapted Usagi for the C64 in *Samurai Warrior* – an ambitious action-adventure.

LEONARDO

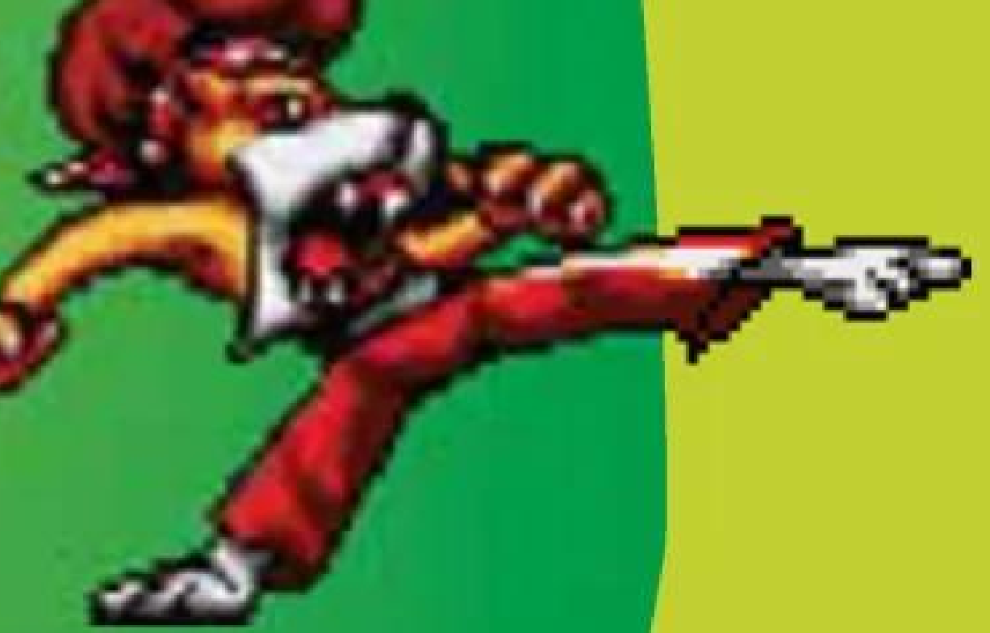


SPECIES: Turtle

MEMORABLE APPEARANCE:
Teenage Mutant Ninja Turtles: Turtles In Time

■ Rare likely wouldn't have been too upset by the similarity between Kevin Bayliss's *Battletoads* designs and the hugely successful *Ninja Turtles*. Leonardo is the de-facto leader of the Turtles and was considered the most rounded fighter in their Nineties videogames, the best of which was probably Konami's *Turtles In Time*.

PRINCE LEON

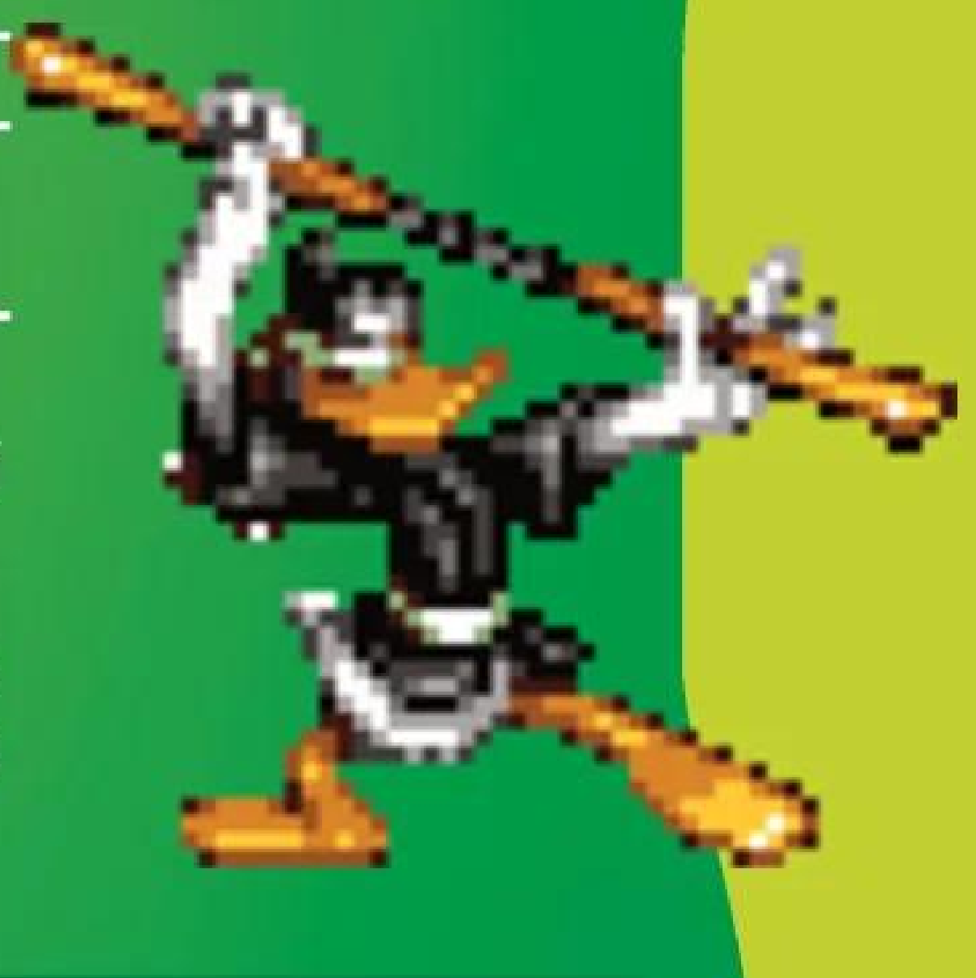


SPECIES: Lion

MEMORABLE APPEARANCE:
Brutal: Above The Claw

■ Based on his 'Powerchord' special attack, Prince Leon of Kenya was something of an aspiring rock star. He featured in GameTek's anthropomorphic versus fighter series *Brutal*. The Sega 32X's *Above The Claw* was the most polished entry in the franchise, but the other *Brutal* games all featured pretty similar gameplay.

COLD SHADOW

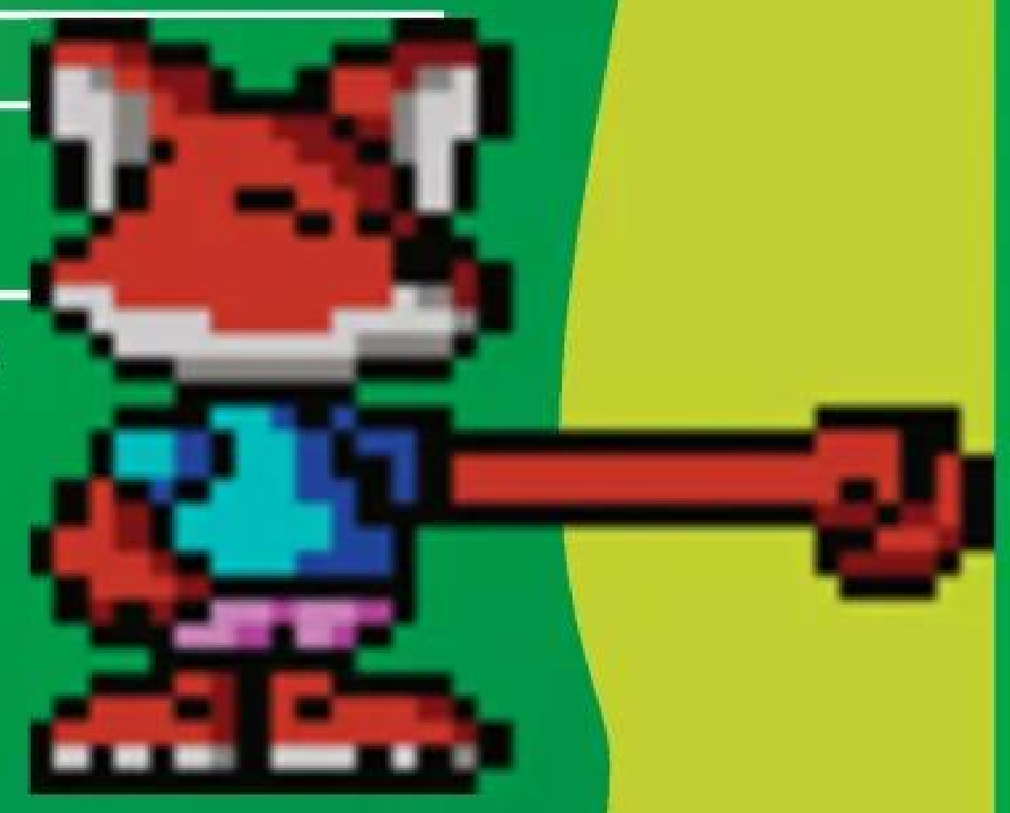


SPECIES: Duck

MEMORABLE APPEARANCE:
Maui Mallard In Cold Shadow

■ Donald Duck used to moonlight as a detective/ninja. No, seriously, there was even a combat platformer called *Maui Mallard In Cold Shadow* where Maui Mallard was Donald's hapless detective cover for a ninja persona – Cold Shadow. 16-bit Disney titles typically impressed, and Cold Shadow's outing fit that trend.

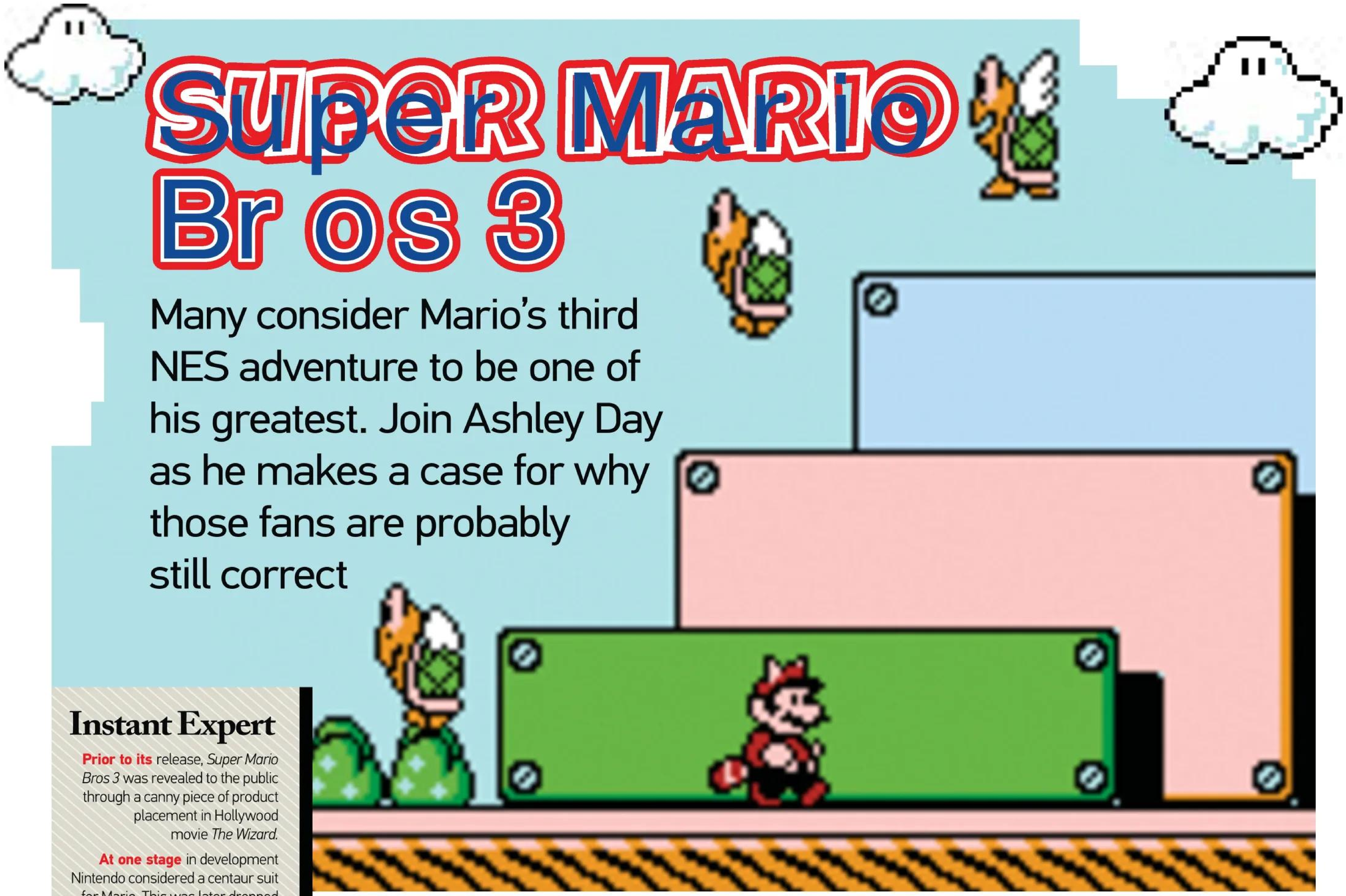
PSYCHO FOX



SPECIES: Fox

MEMORABLE APPEARANCE:
Psycho Fox

■ He's often likened to Mario, apparently because his one game was on Sega's answer to the NES – the Master System – and because said outing was a colourful platformer. Psycho Fox's most un-Nintendo-like move was taking out opponents by punching them in the face! Well, he was called *Psycho* Fox.



Super Mario Bros 3

Many consider Mario's third NES adventure to be one of his greatest. Join Ashley Day as he makes a case for why those fans are probably still correct

Instant Expert

Prior to its release, *Super Mario Bros 3* was revealed to the public through a canny piece of product placement in Hollywood movie *The Wizard*.

At one stage in development Nintendo considered a centaur suit for Mario. This was later dropped in favour of the raccoon suit.

Although the Koopalings are all named after celebrities, their appearances were based upon seven of the programmers working under Shigeru Miyamoto.

At 17 million copies sold, *Super Mario Bros 3* remains one of the bestselling non-bundle games ever released. The Virtual Console version and the GBA release have sold a further 1 million and 5 million copies respectively.

The idea of *Mario 3*'s ingenious overworld map was later used again, albeit in simplified form, in *Super Mario World*, and was more accurately copied in both *New Super Mario Bros* games.

Super Mario Bros 3 is one of only ten games to be preserved in the US Library of Congress's Game Canon initiative. It is the only Japanese game in the list.

The idea of different 'suits' for Mario to wear, rather than simple power-ups, later resurfaced in *Super Mario Galaxy*'s bee, boo and spring suits.

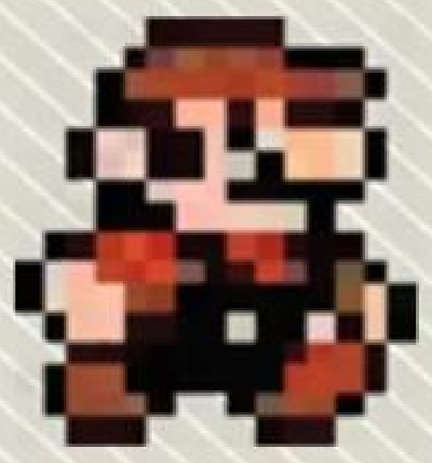
Whether you were wealthy enough to afford one or not when it was first released, the NES was undeniably a landmark turning point for videogames. After the primacy of the Atari 2600, the clumsy DIY feel of Spectrum and C64 games (which was perhaps understanding when you consider some of these games were made by kids in their bedrooms), and the daunting inaccessibility of the games found in arcades, Nintendo's unassuming grey box came along and changed everything with one simple rule: make games fun. Not every game Nintendo released or published was great, of course, but every game that Nintendo created was always easy to pick up and play, controlled with a confident slickness, presented a decent challenge without ever being unfair, and positioned the videogame as a wondrous window into another world, a world filled with a sense of discovery and joy that some felt had been missing. NES games were what videogames should have been all along – it's just that nobody really realised until the day they were faced with them.

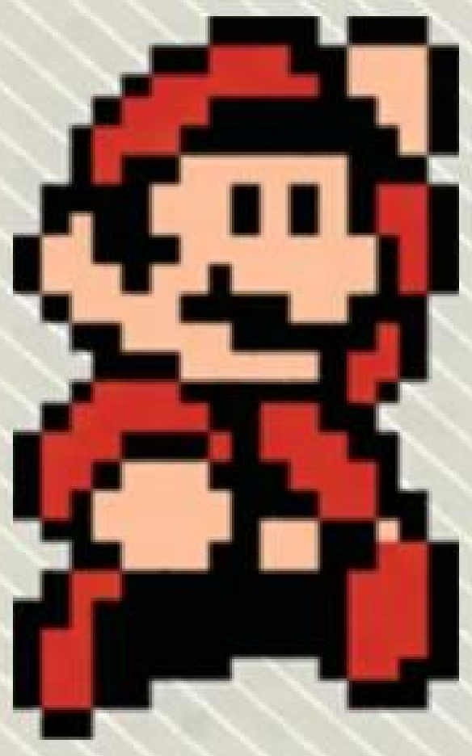
The crown jewel of this era is undoubtedly *Super Mario Bros 3*. While the two previous *Mario* games had been exceptional adventures when compared to those games available on other systems of the time, *Super Mario Bros 3* was exceptional when compared to Nintendo's own achievements. It took the template laid out by the original *Super Mario Bros* and expanded it in every possible direction, resulting in a bigger, longer, deeper and even taller videogame. Its seemingly never-ending wealth of interactions epitomised the NES software catalogue and established the *Mario* series as something truly special in the world of videogames.

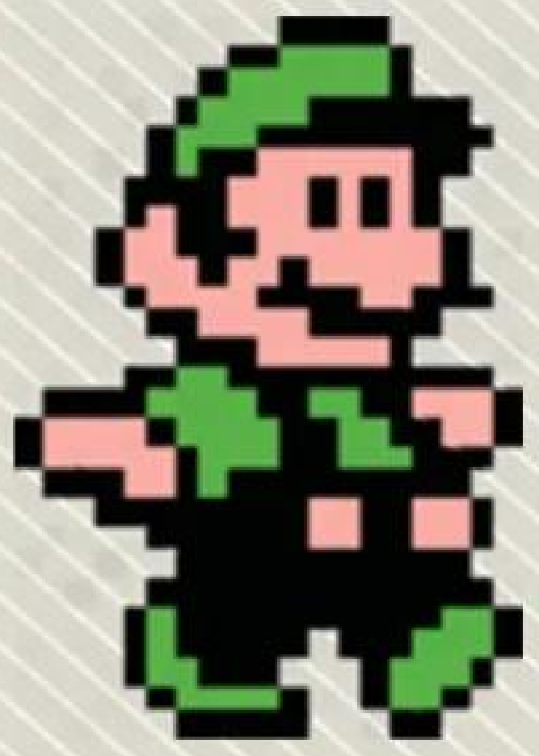
It might not have seemed like such a revolutionary game at first glance, since the opening few seconds were almost exactly the same as *Super Mario Bros*. The player is put in control of a diminutive Mario, with a paltry two commands – run or jump – at his disposal, the ability to eat a mushroom to grow in size, and the same old enemies – the Goomba and Koopa Troopa – to take on in the same old way. Only a fresh lick of paint indicated that this was a different game at all. But even within that first level, there are a couple of hints of the greatness to come. Around halfway through, we come across the first of many new power-ups, a leaf that illogically transforms Mario into a raccoon, complete with ears and stripy tail. Even more illogically, we discover that running at high speed for long enough while dressed in the raccoon suit will cause Mario to lift from the ground and fly through the air, eventually leading to a hidden batch of coins high above the ground. And, with that, the tone is set for a game that has a new surprise around every corner and a secret treat to discover where most games would make do with the

Pixel Perfect

The many sumptuous sprites of Super Mario Bros 3


» Mario


» Super Mario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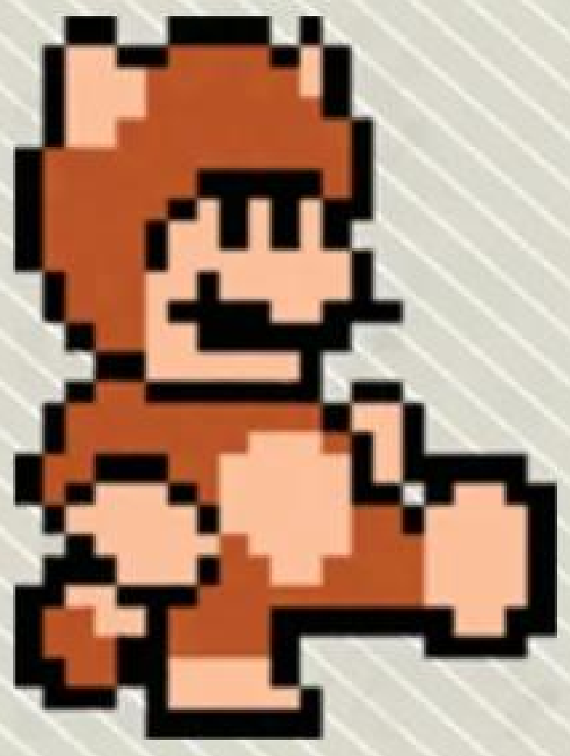
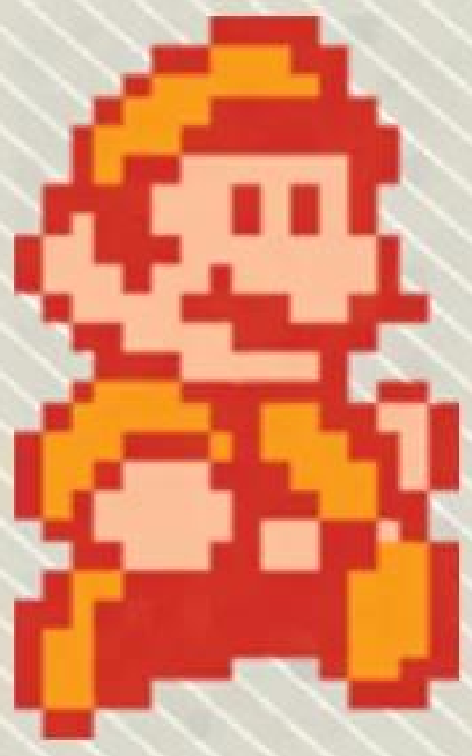
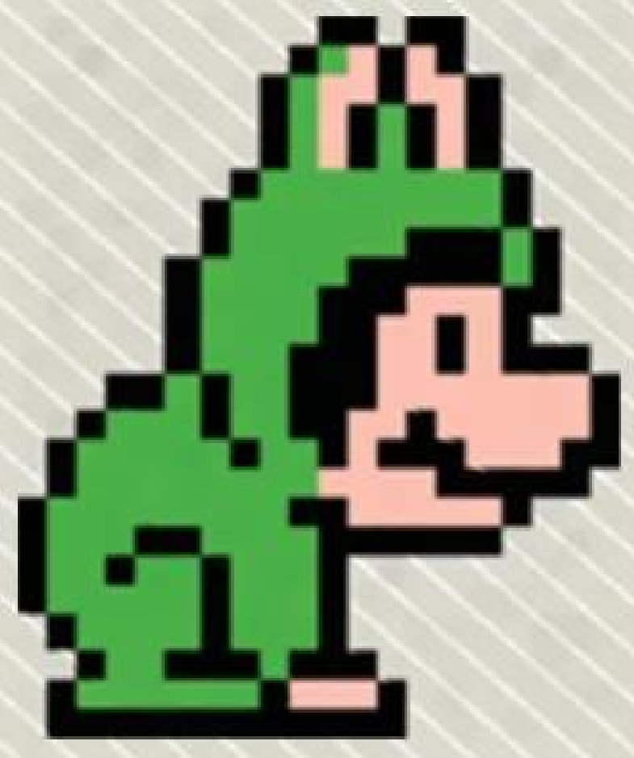

» Tanooki Mario


» Fire Mario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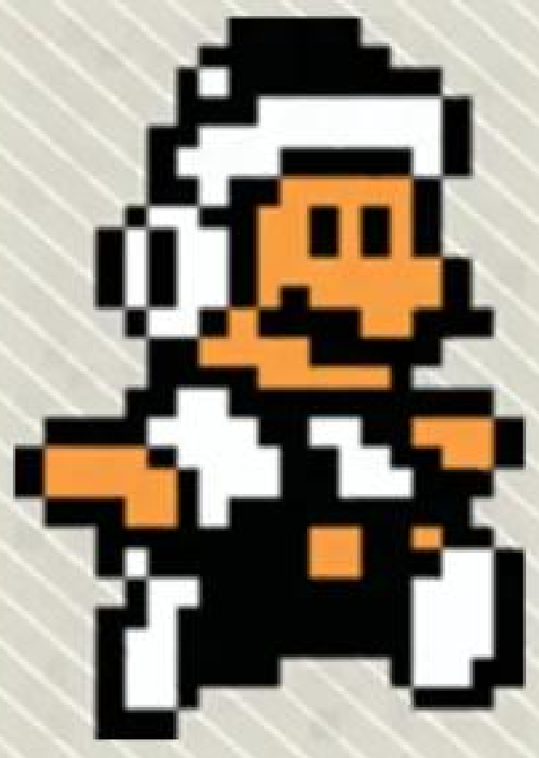
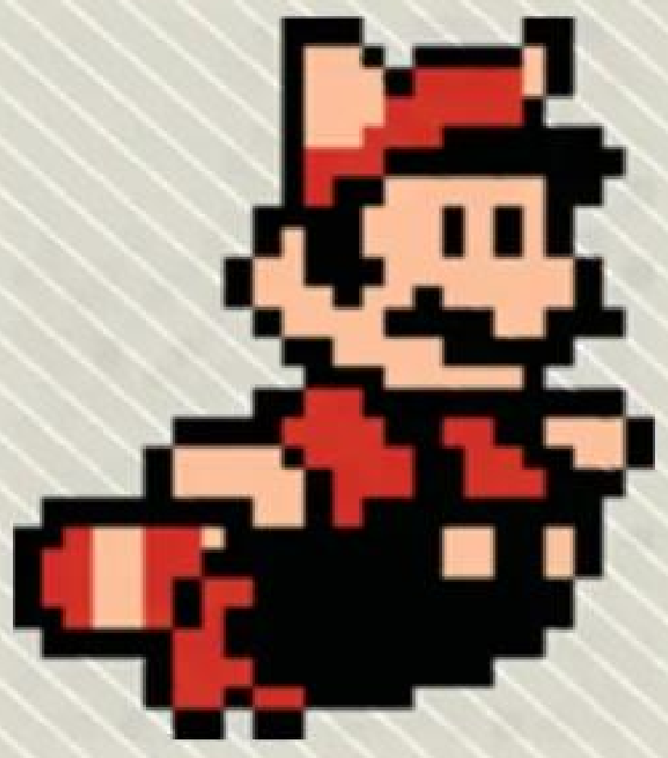

» Hammer Mario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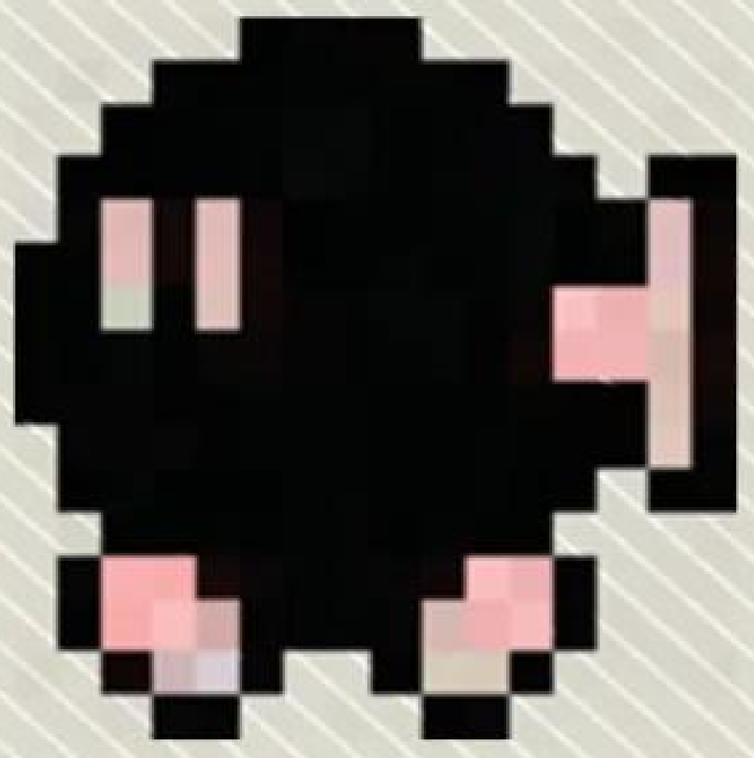
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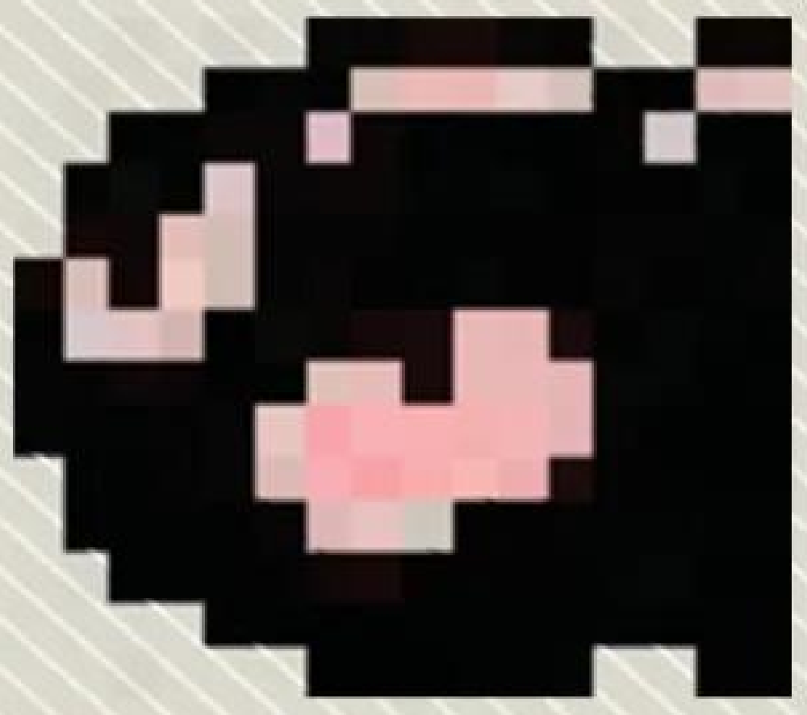
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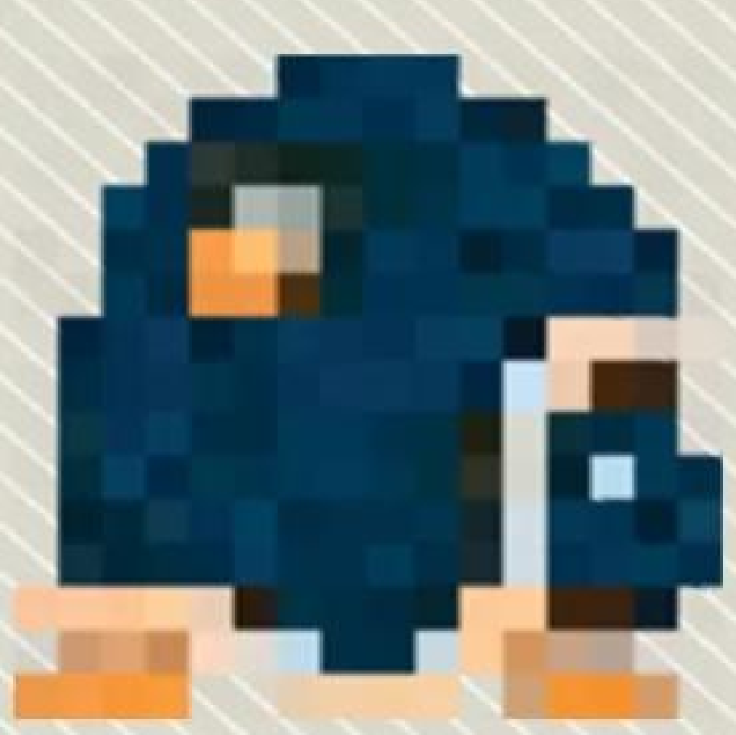
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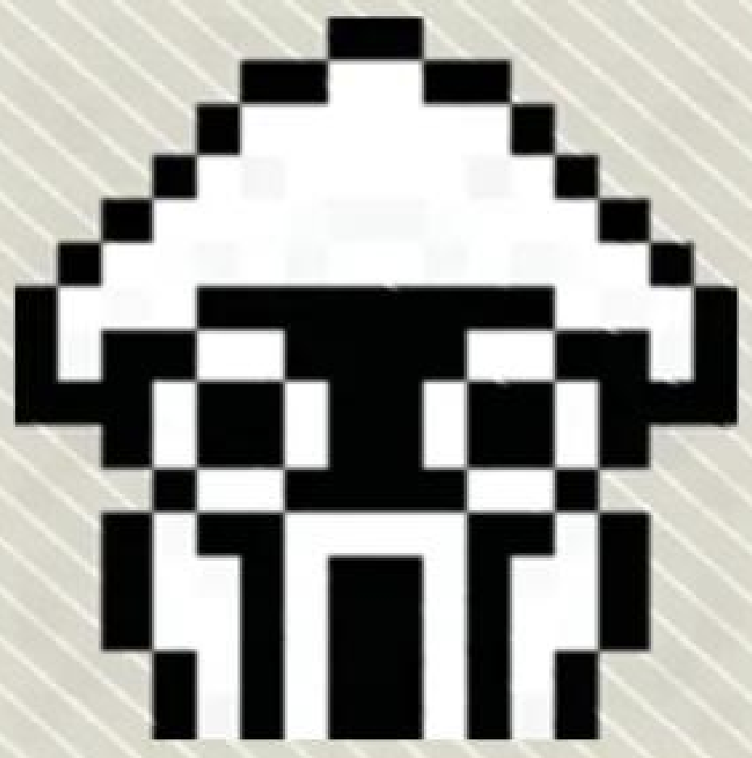
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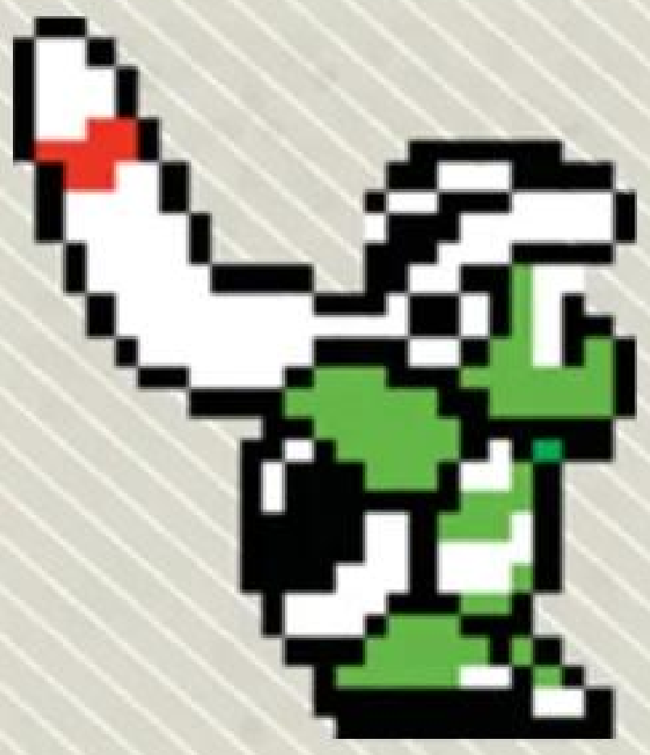
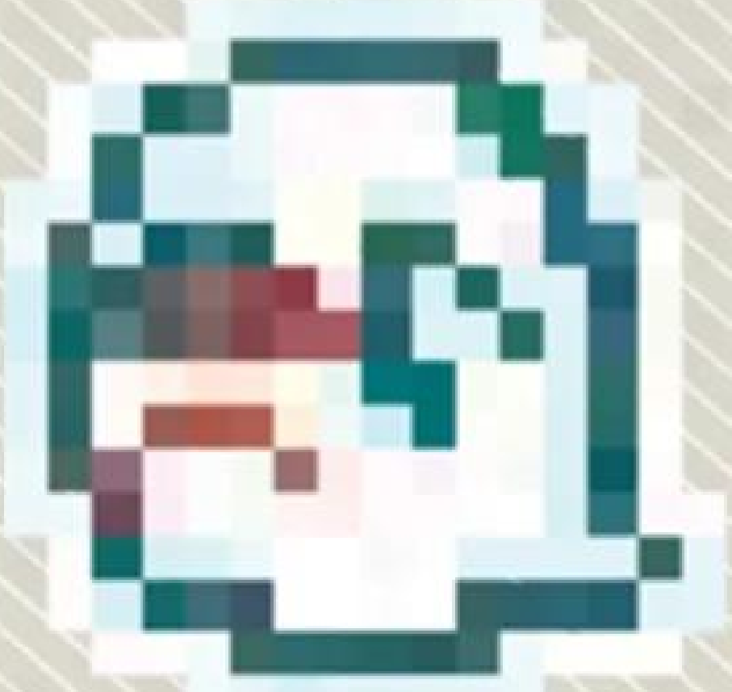
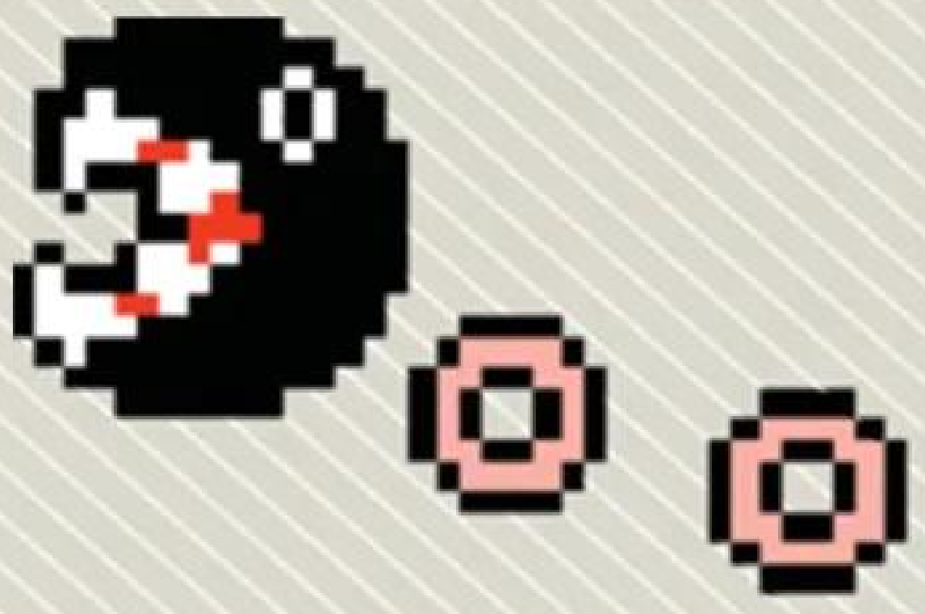

» Boomerang Bros


» Boo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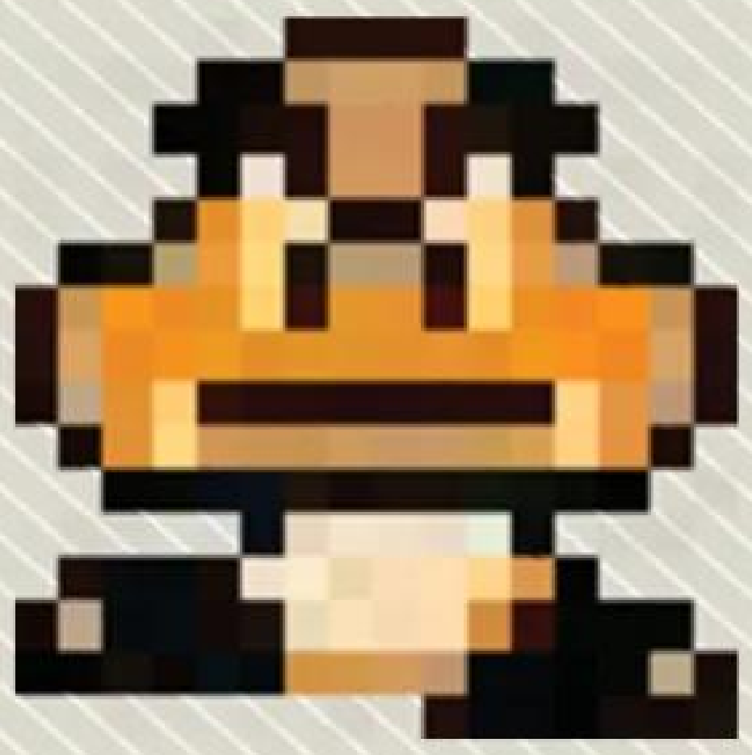
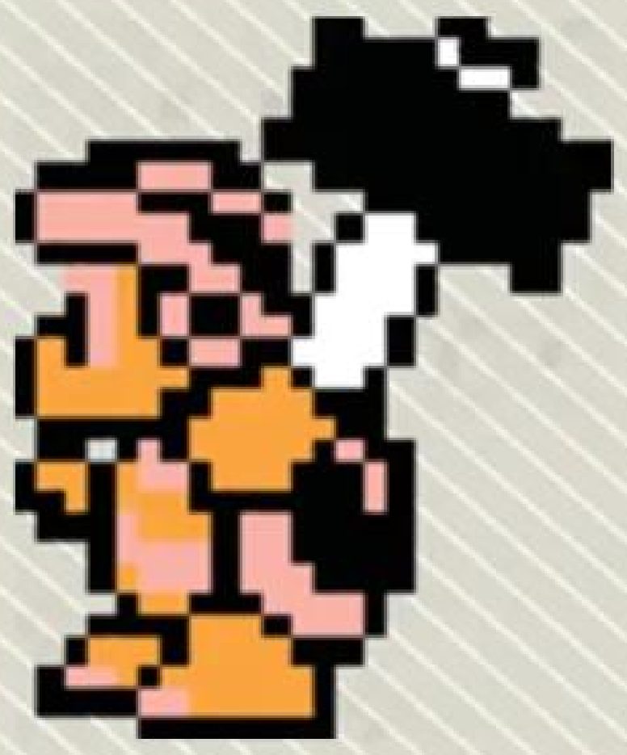

» Goomba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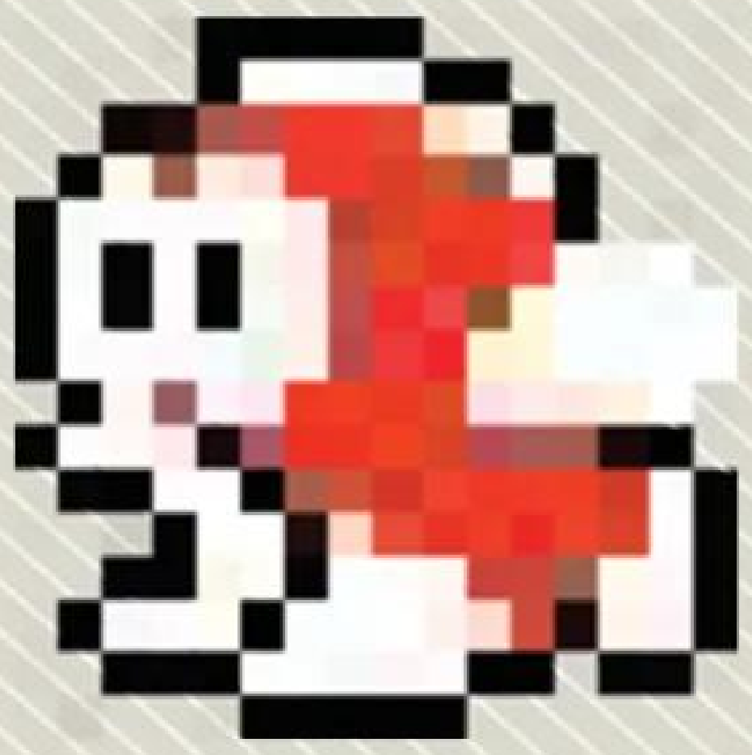
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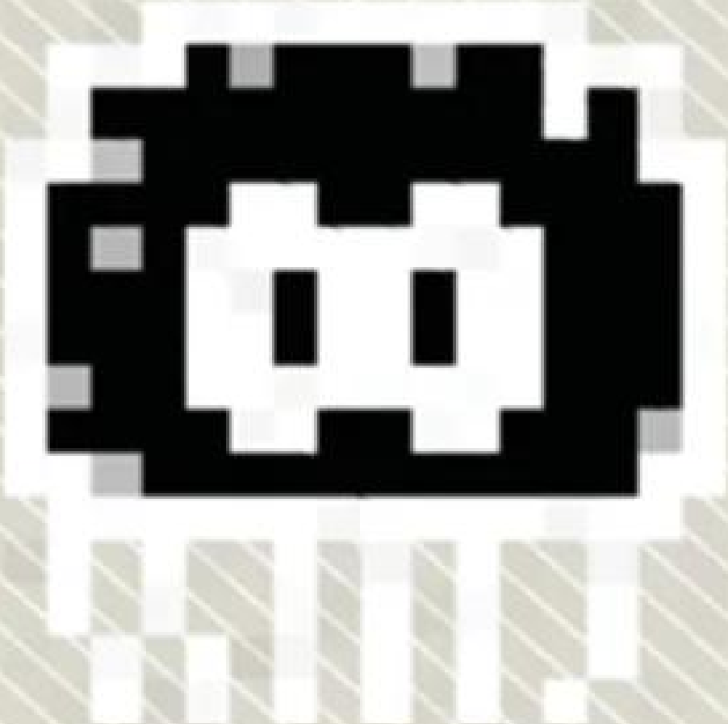
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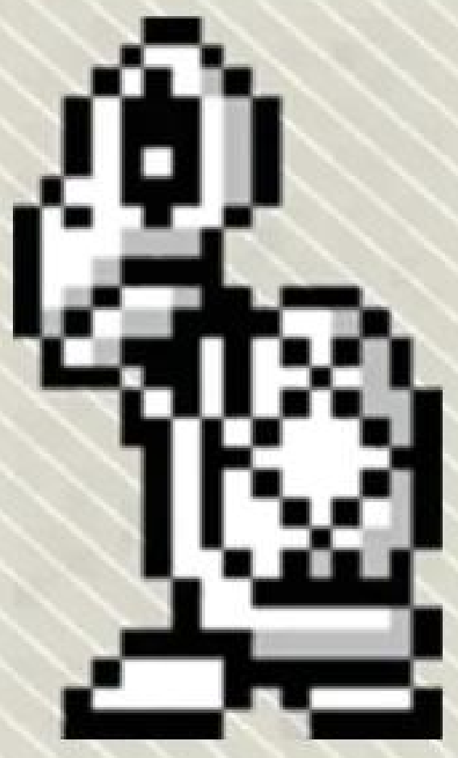
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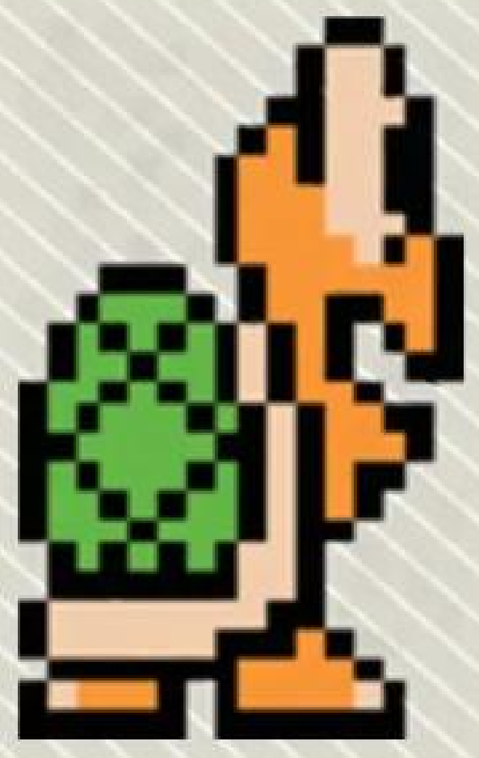
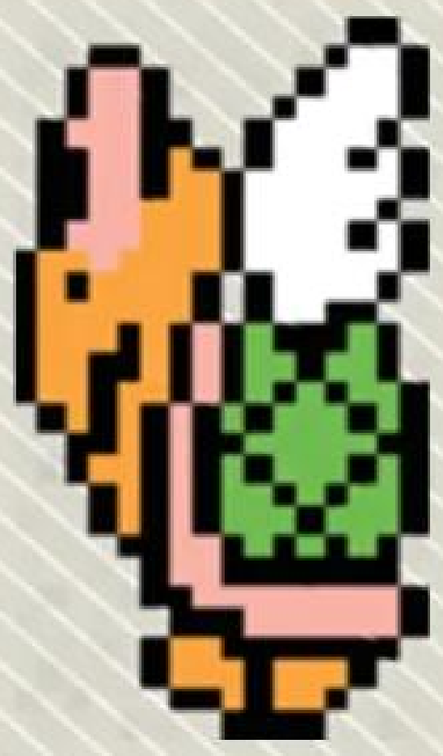
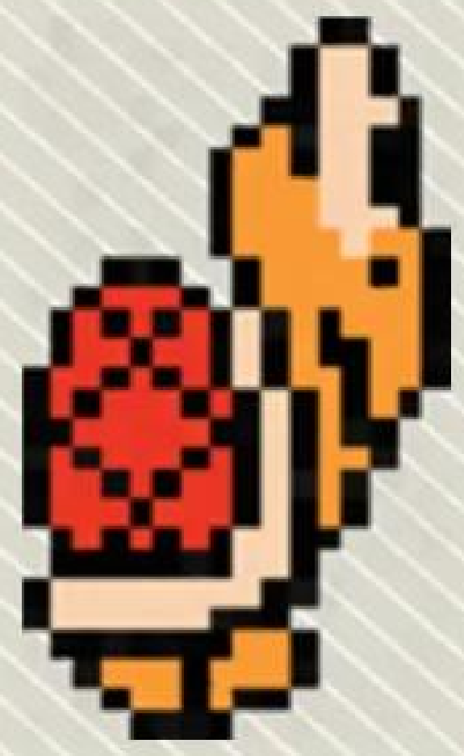

» Koopa Troopa (Green)


» Koopa Paratroopa (Green)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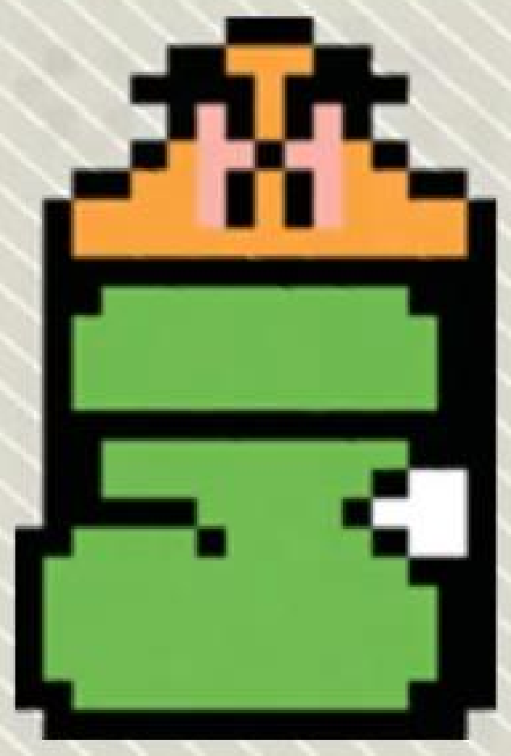
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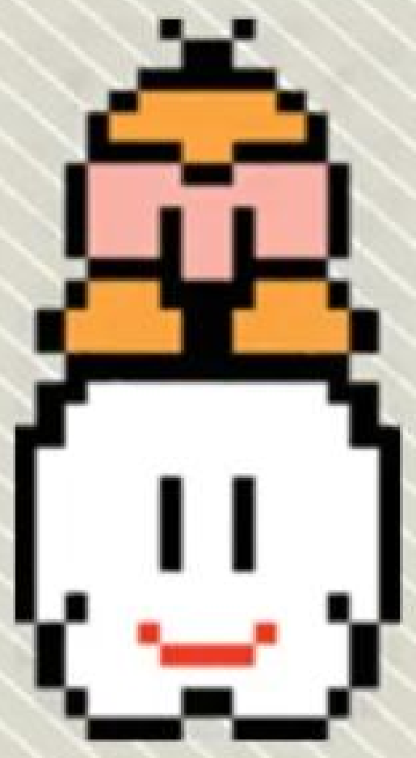
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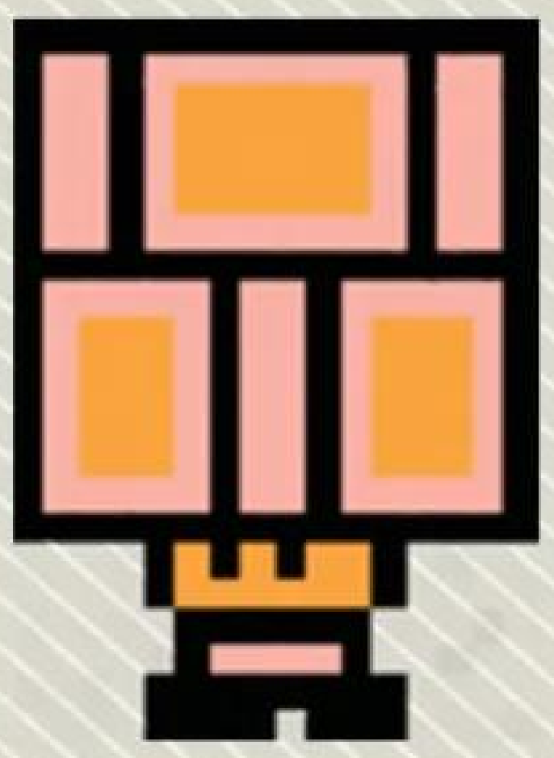
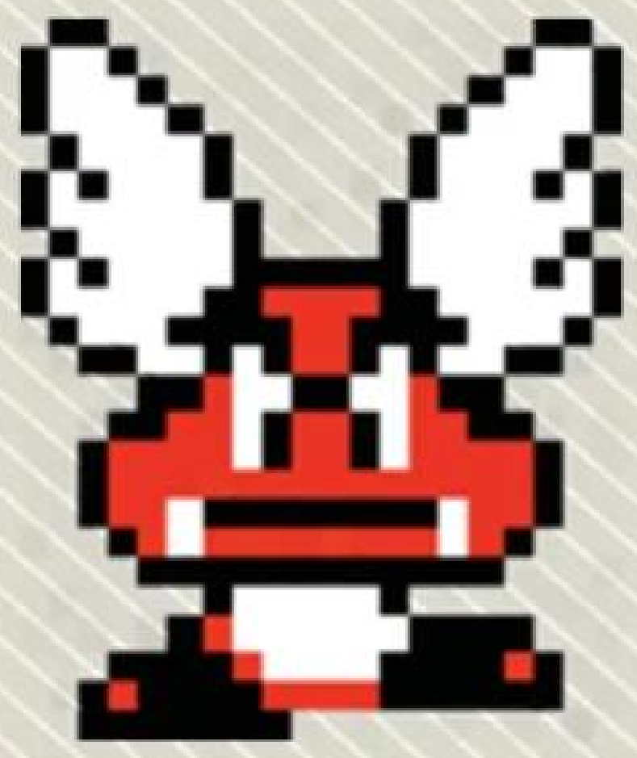

» Micro Goomba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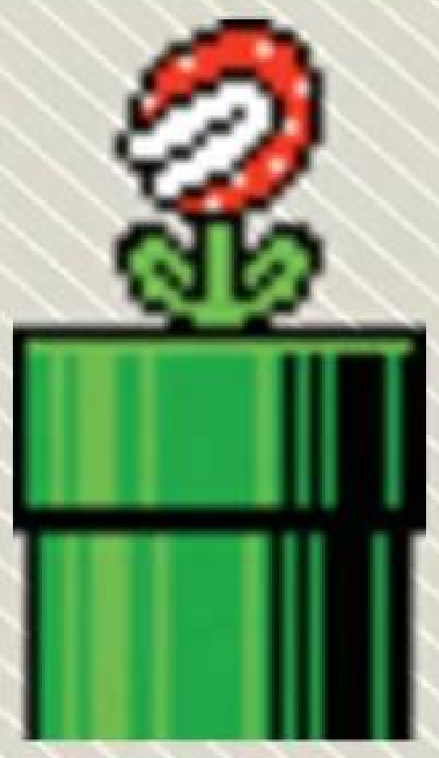
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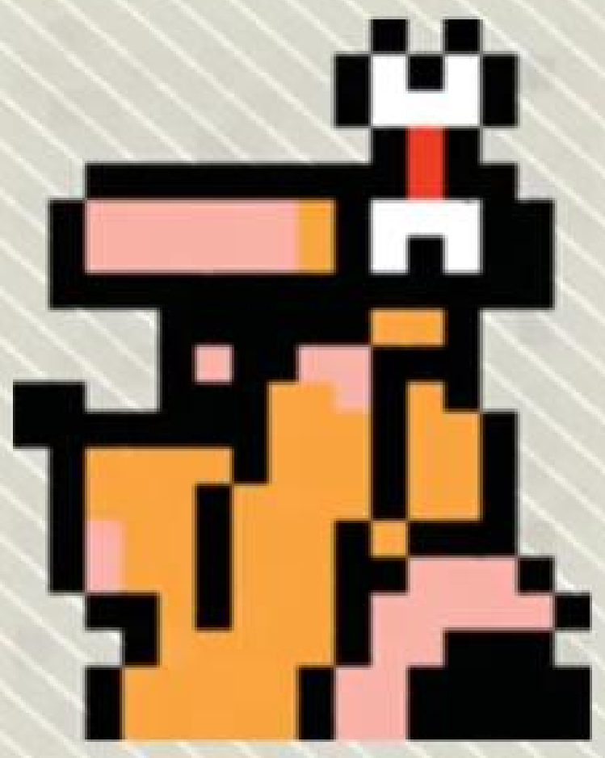
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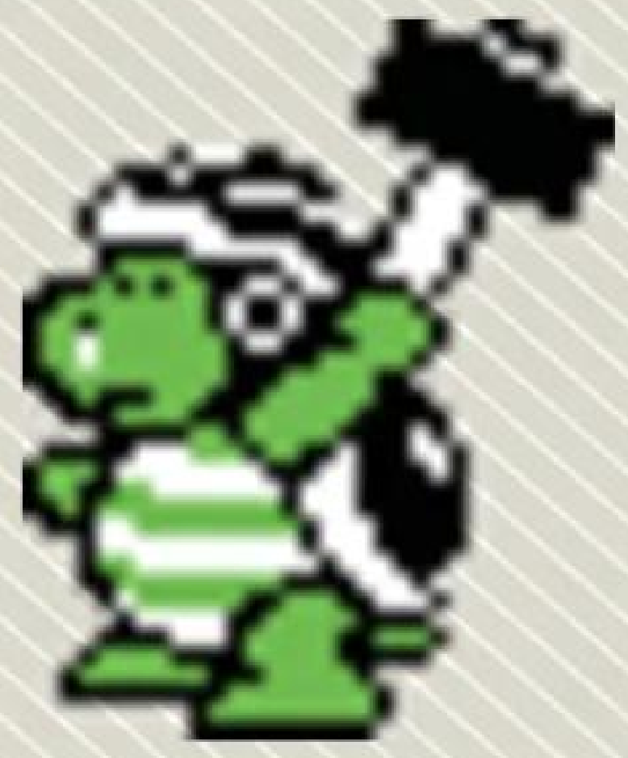
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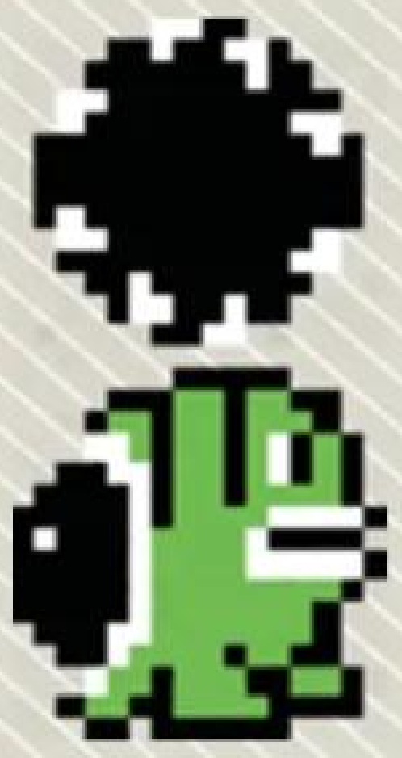
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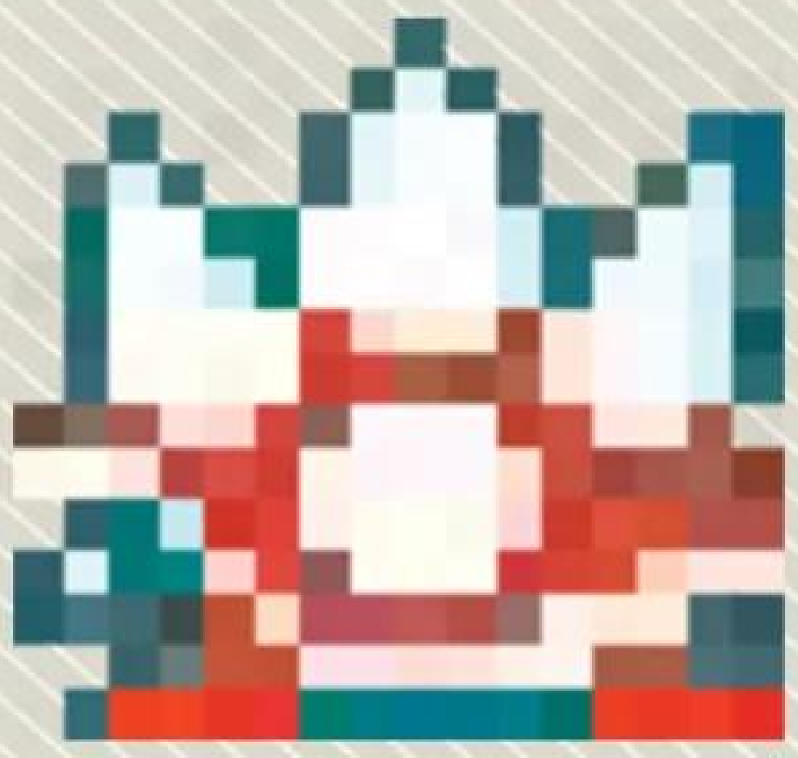
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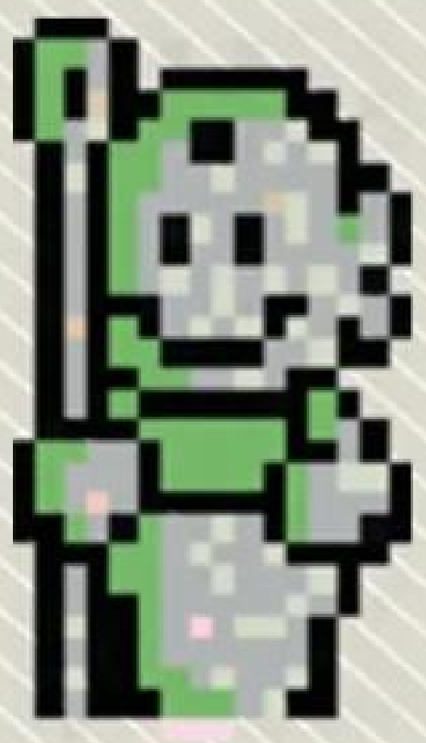
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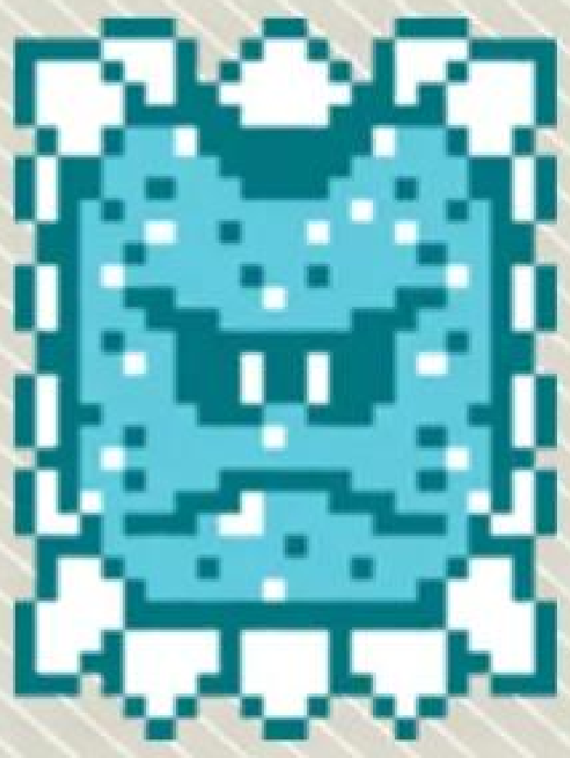
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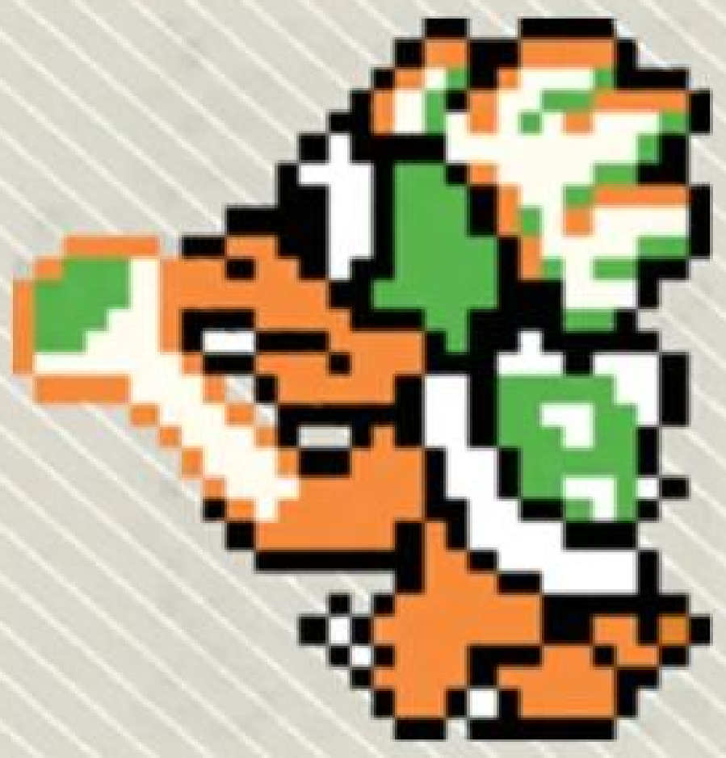
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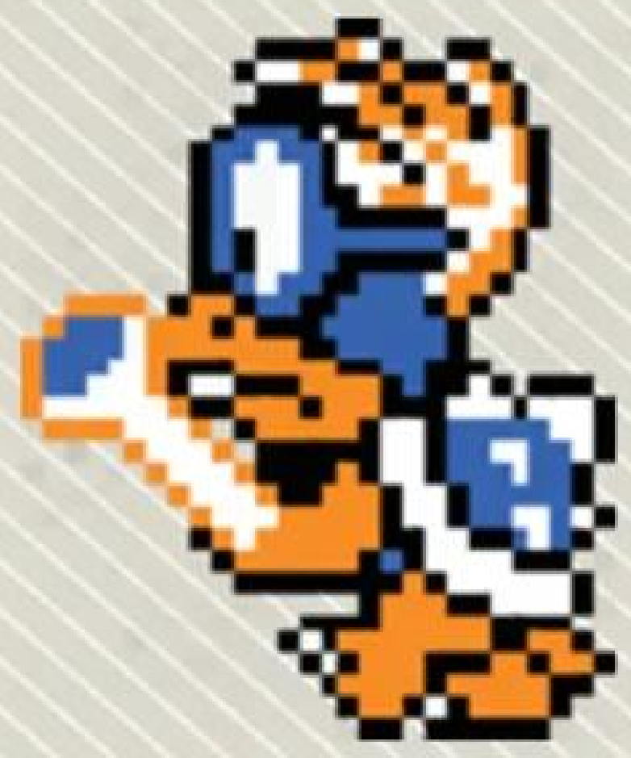
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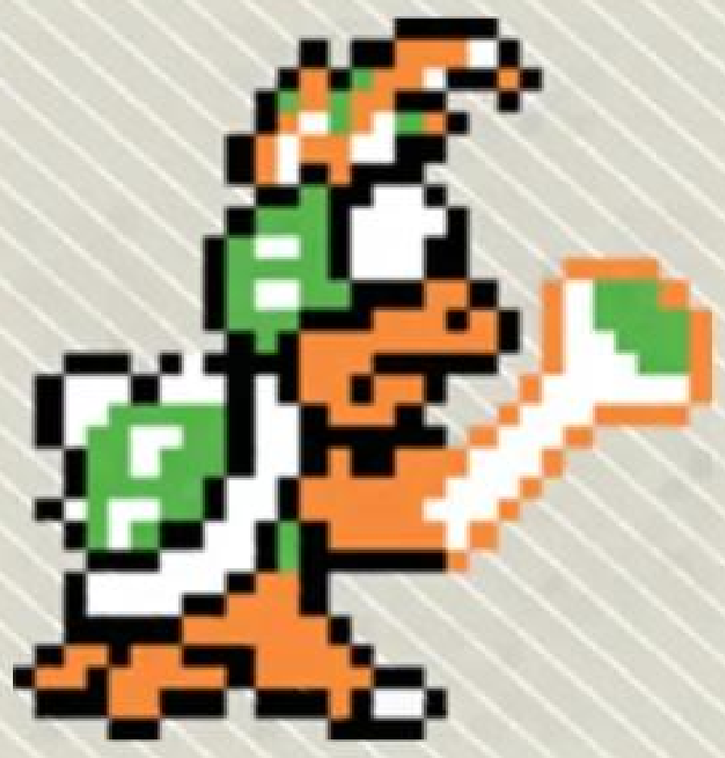
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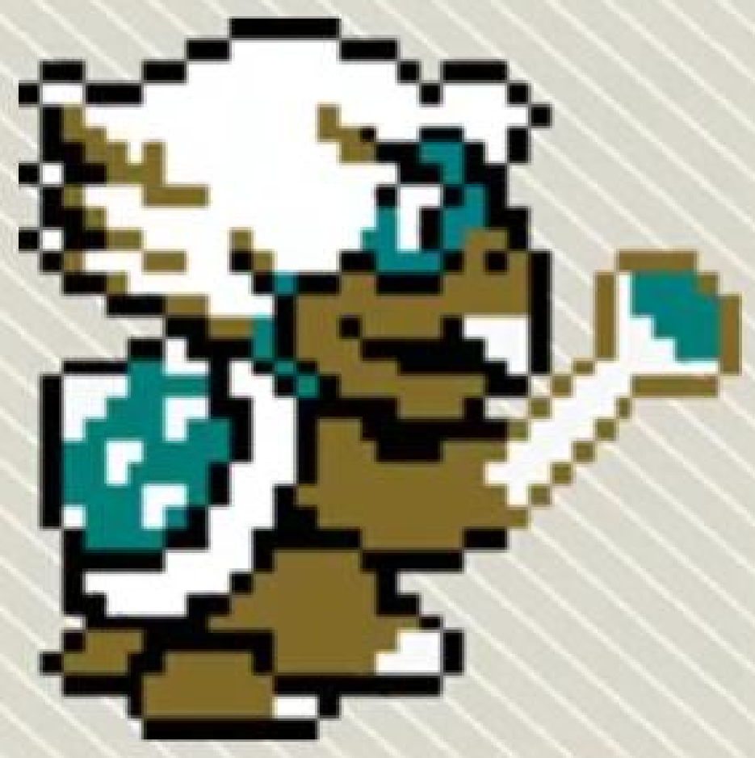
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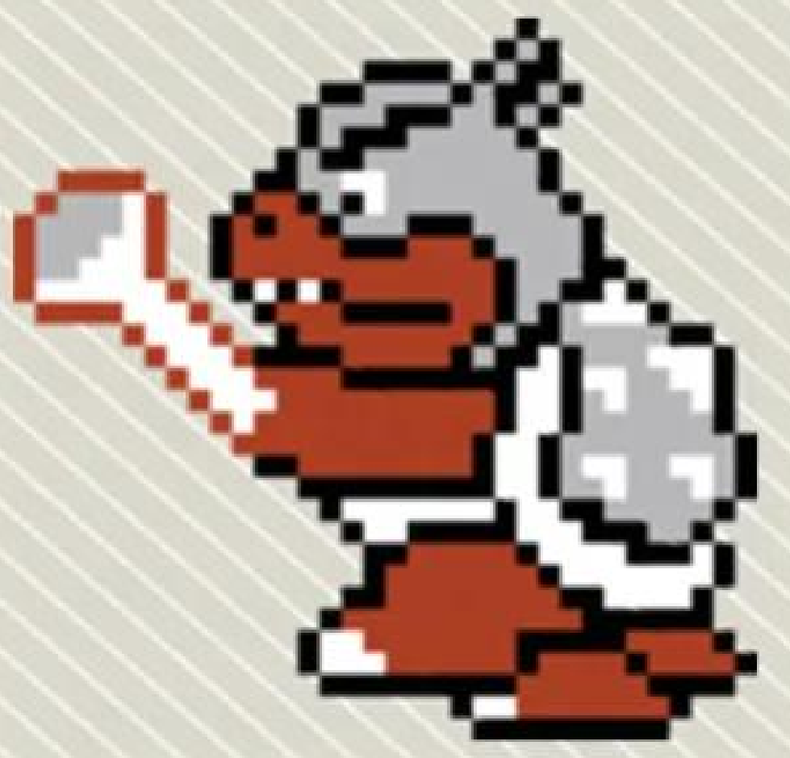
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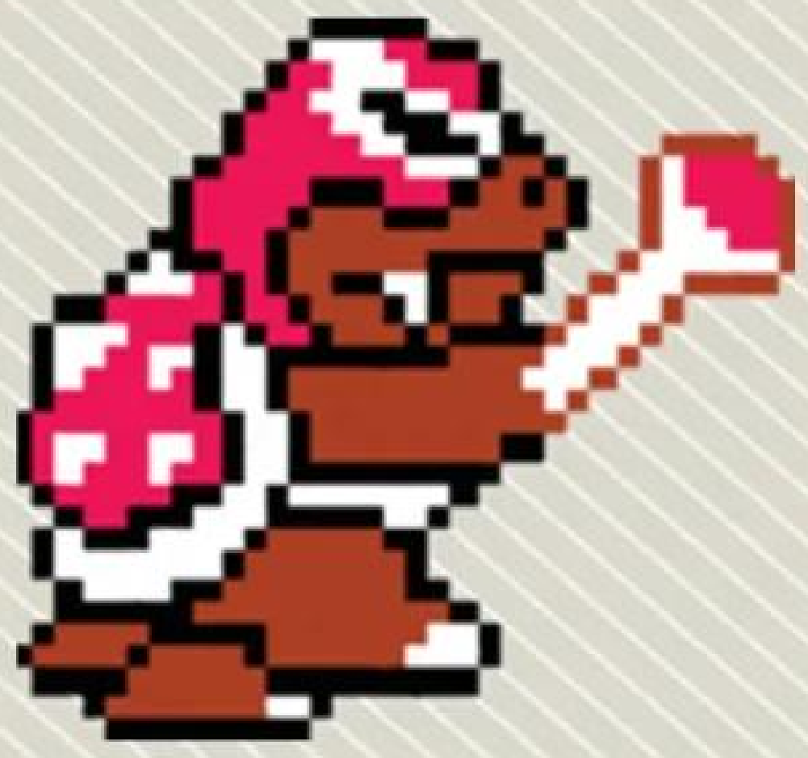
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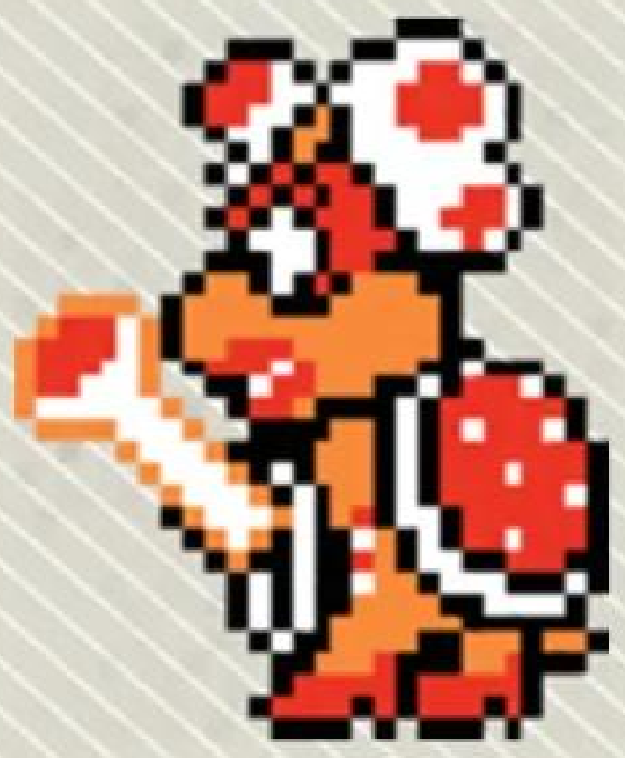
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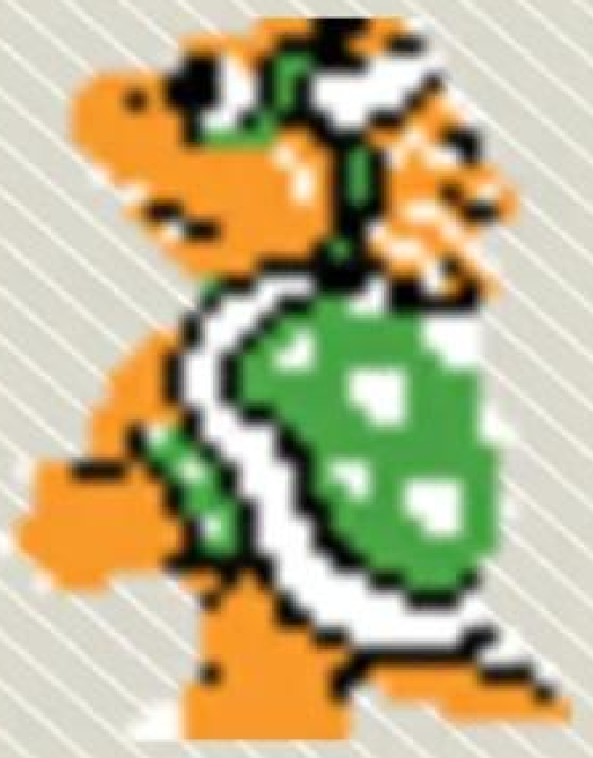

» Bowser

Critical Reception

What the gaming press thought…

MEAN MACHINES
£1.75
3

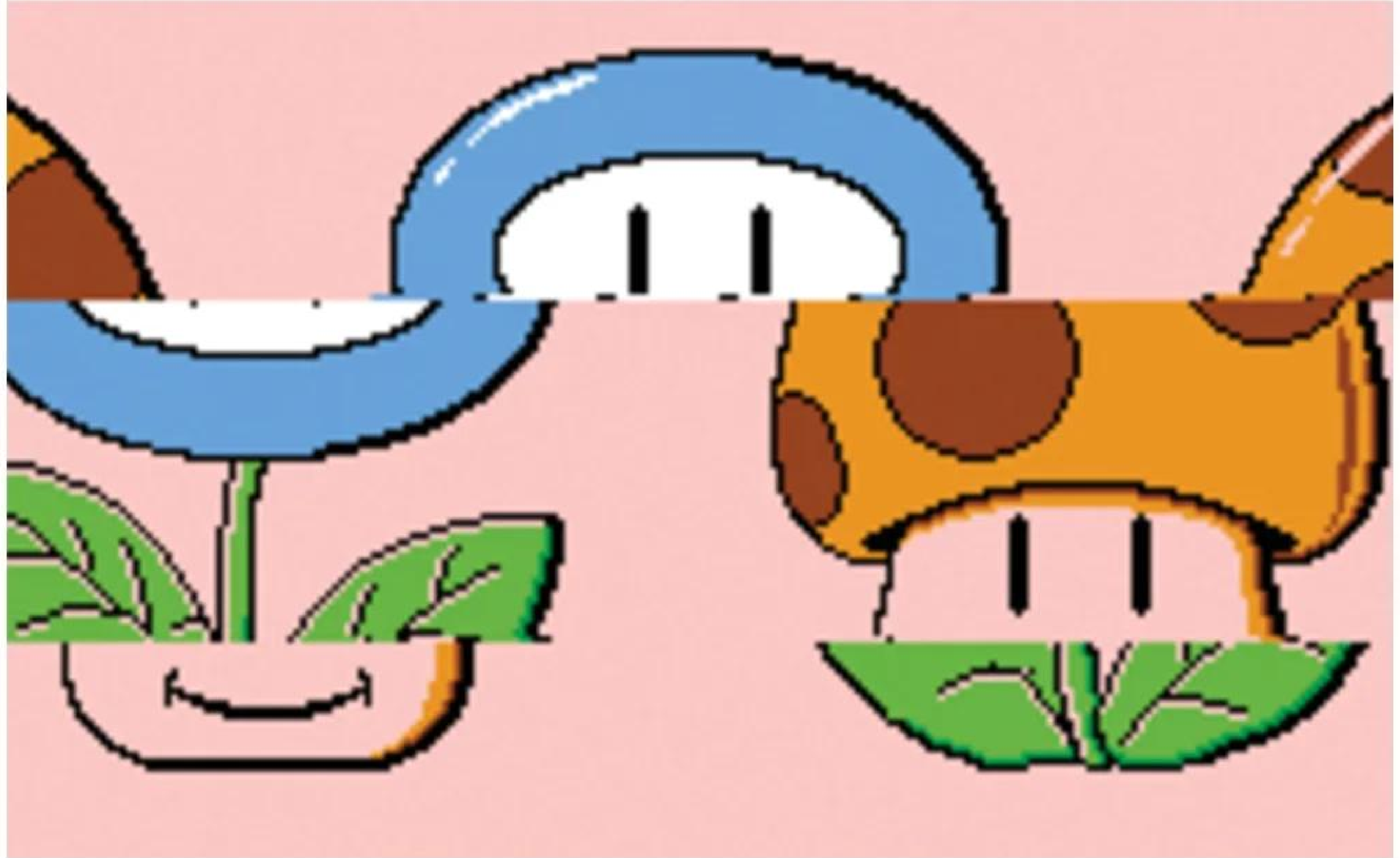
> “Once you start playing you want to keep going, just to see what surprises are around the next corner! I ended up playing it all night!”
>
> - **JULIAN RIGNALL,** MEAN MACHINES, 1991

Speedrun.com’s Top times

ANY%
- **NAME:** KUT01K
- **TIME:** 00:03:666ms

ANY% WARPLESS
- **NAME:** MITCHFLOWERPOWER
- **TIME:** 00:50:10

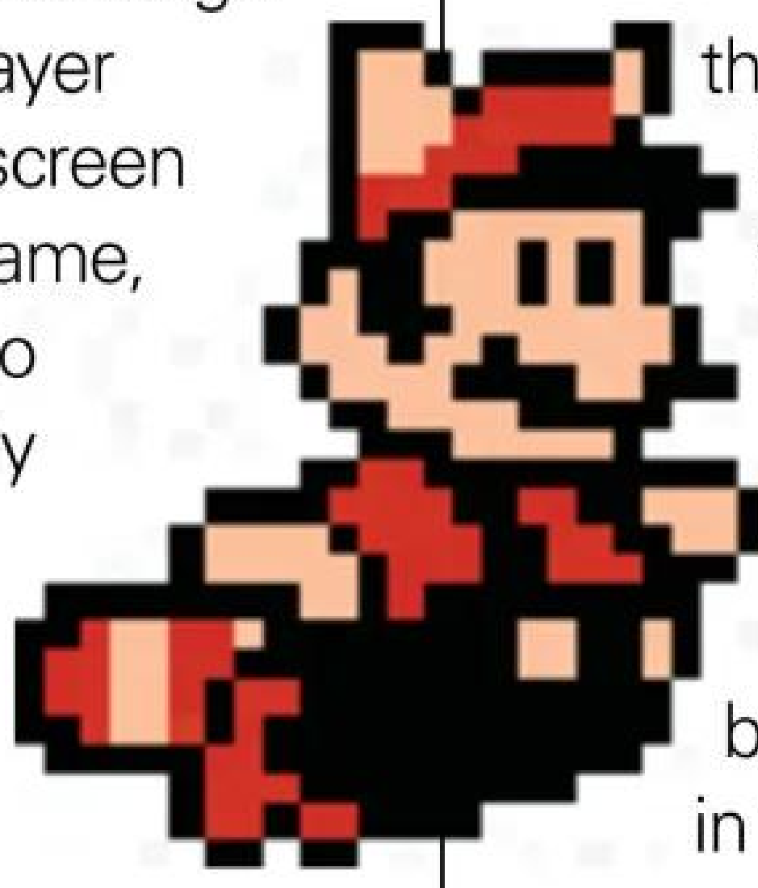
100%
- **NAME:** MITCHFLOWERPOWER
- **TIME:** 1:02:38



» This sliding mini-game was one of several that could earn bonuses for the player between levels.

rudimentary and the obvious.

Nintendo and, more accurately, Shigeru Miyamoto, had played around with secrets before, of course. Who could forget the warp pipes of *Super Mario Bros*, accessed by running along the top of the level of World 1-2? Or the many secrets hidden behind the walls and bushes of Hyrule in *The Legend Of Zelda*? Miyamoto was famous for taking a childlike curiosity and sense of discovery and using it as inspiration for a videogame. And in *Super Mario Bros 3*, he turned that curiosity into an art form, every inch of the Mushroom Kingdom littered with secret areas and random events.



Not even the menus were safe from this playful sandbox feel. Rather than simply progress from one stage to another in *Mario 3*, the player was presented with a map screen somewhat akin to a board game, allowing them to move Mario around the board and actually *choose* which levels he would tackle next, take in some mini-game distractions, and figure out how to take a short cut or two. Take the Hammer Bros that wandered around the map screen, for example: bump into one and you’d be transported to a confrontation with two of the deadliest enemies in the *Mario* series. Most players would do everything to avoid them, but if you were brave enough to take them on and win you’d be rewarded with a random power-up that, if you were lucky, would be a hammer that could break certain rocks on the map and open up new routes to the end of the world.

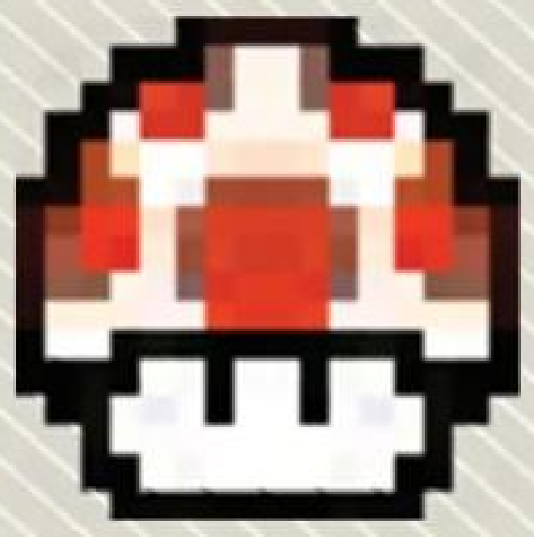
And, of course, there was the Warp Whistle. Like the warp pipes of the first game, the whistle allowed experienced players to skip ahead to the more challenging later levels. But figuring out how to find those whistles was a much harder proposition. The first, for example, required the player to discover that it was possible to actually enter the background layer of the stage in World 1-3 by crouching on an unassuming white block for several seconds. Once into the background, Mario could run all the way along the stage, safe from enemy attack, and beyond the goal to a secret Toad House where he would be rewarded with a Warp Whistle.

This trick was actually one of the simpler secrets to be uncovered in *Super Mario Bros 3*. One that transformed a wandering Hammer Brother into an airship, for example, could only be activated by finishing a level in a time with an even number at the end while also holding a multiple of 11 coins. Such formulae were cleverly used to give the game a mysterious feeling of randomness, while others, like the Warp Whistle secret, were more about engendering a sense of exploration in the player.

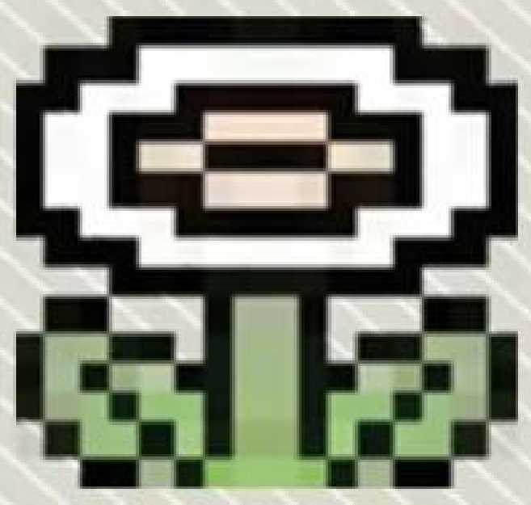
Either way, these secrets and random events made *Super Mario Bros 3* a game way ahead of its time. It was a game that could be played over and over again, each playthrough offering a new surprise over the last. It was a game that offered real choice to the player, years before the branching narrative RPG became popular. And it was a game so packed with new and exciting elements to discover that some of its parts took on a near-mythical status, allowing fellow players to trade their discoveries and speculate about what might also be hidden. 20 years on, it’s a game that still keeps surprising us, and we can’t think of many other videogames that can make the same claim. ✱

Power Ups

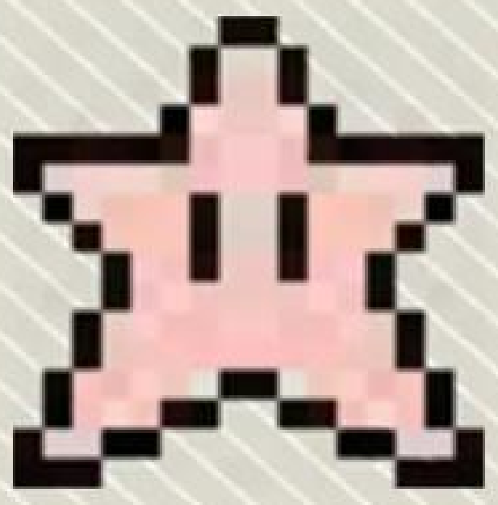
Mario is famed for his power-ups, and Super Mario Bros 3 had some of the greatest ever seen in the whole series



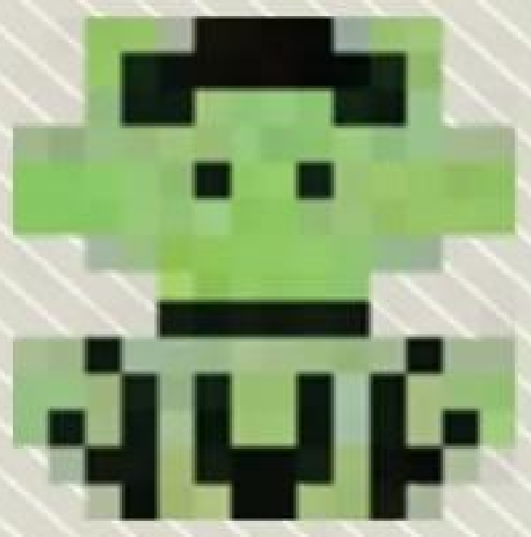
» Mushroom
An old favourite. Transforms Mario into the larger Super Mario. Effectively acts as an extra life.



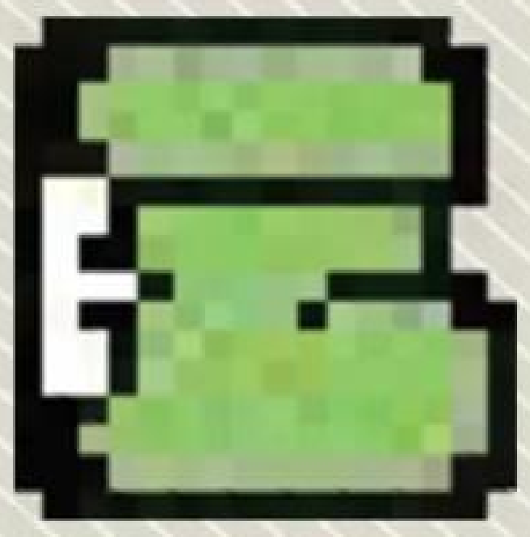
» Fire Flower
Another classic. This one grants Mario the ability to throw fireballs for a limited time.



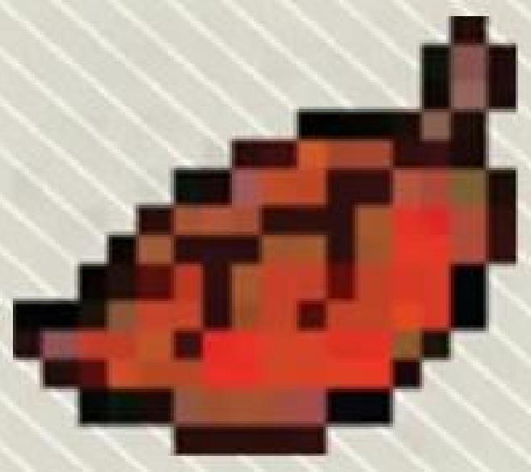
» Super Star
Makes Mario invulnerable for a short period of time. You’ll get to listen to some funky music, too.



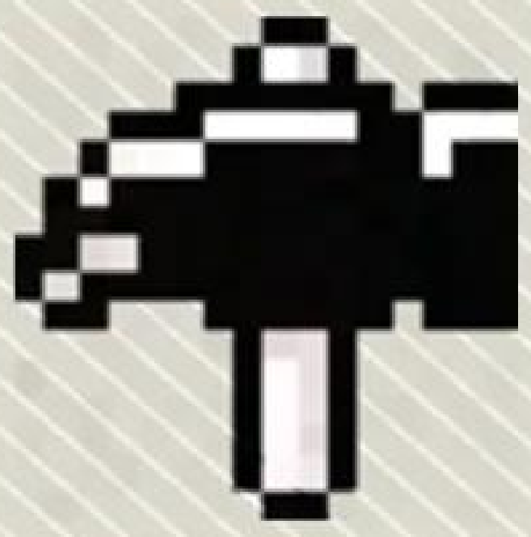
» Frog Suit
Turns Mario into a frog, granting him exceptional hopping and swimming ability. It’s very, very handy.



» Kuribo
A very rare boot that we find a Goomba hopping around in. Mario can use it like a vehicle.



» Leaf
Turns Mario into a raccoon and grants him the ability of flight. It’s a very useful item so make the most of it.



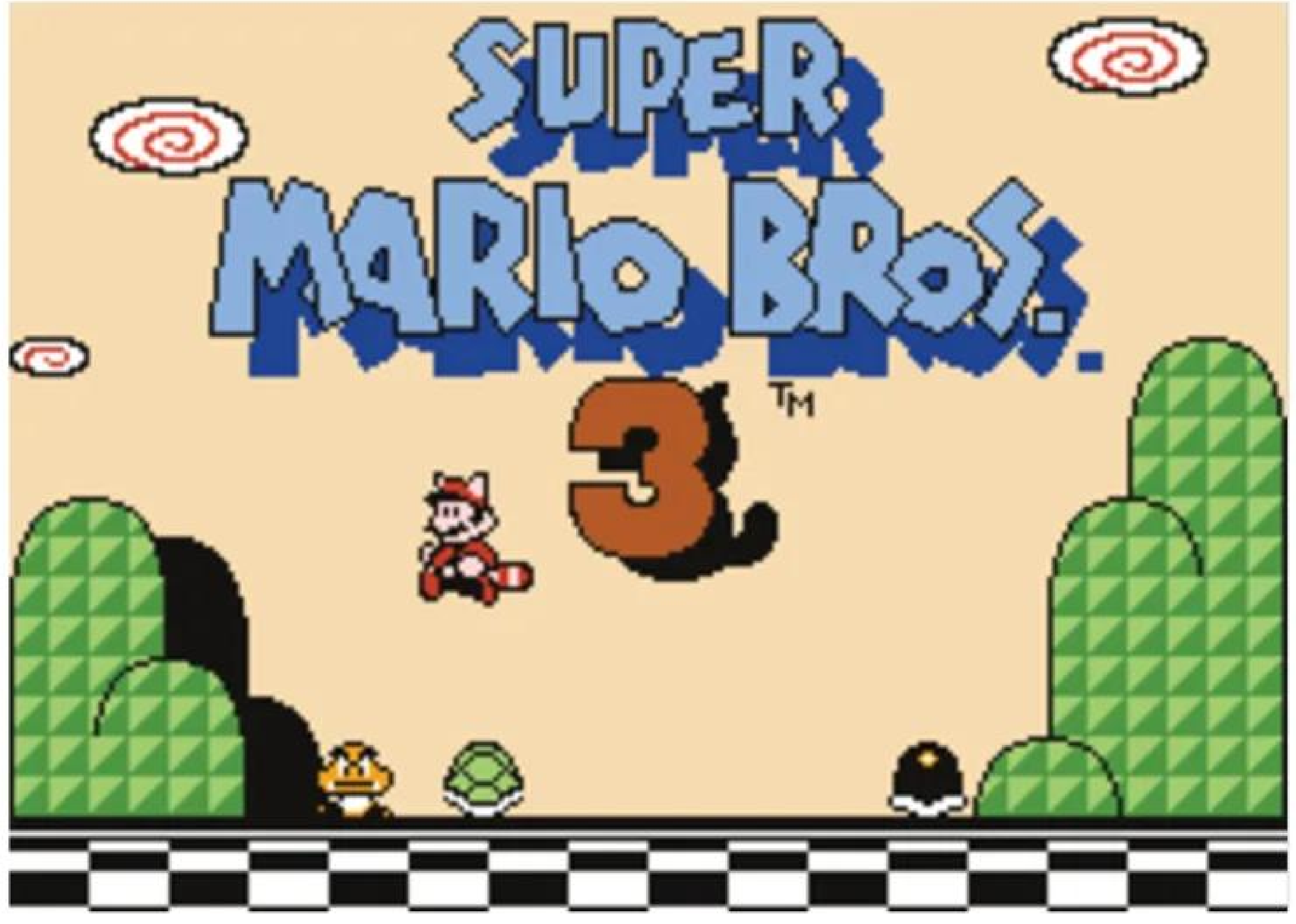
» Hammer
Transforms Mario into a Hammer Brother, with the ability to throw hammers. It’s hammer time!

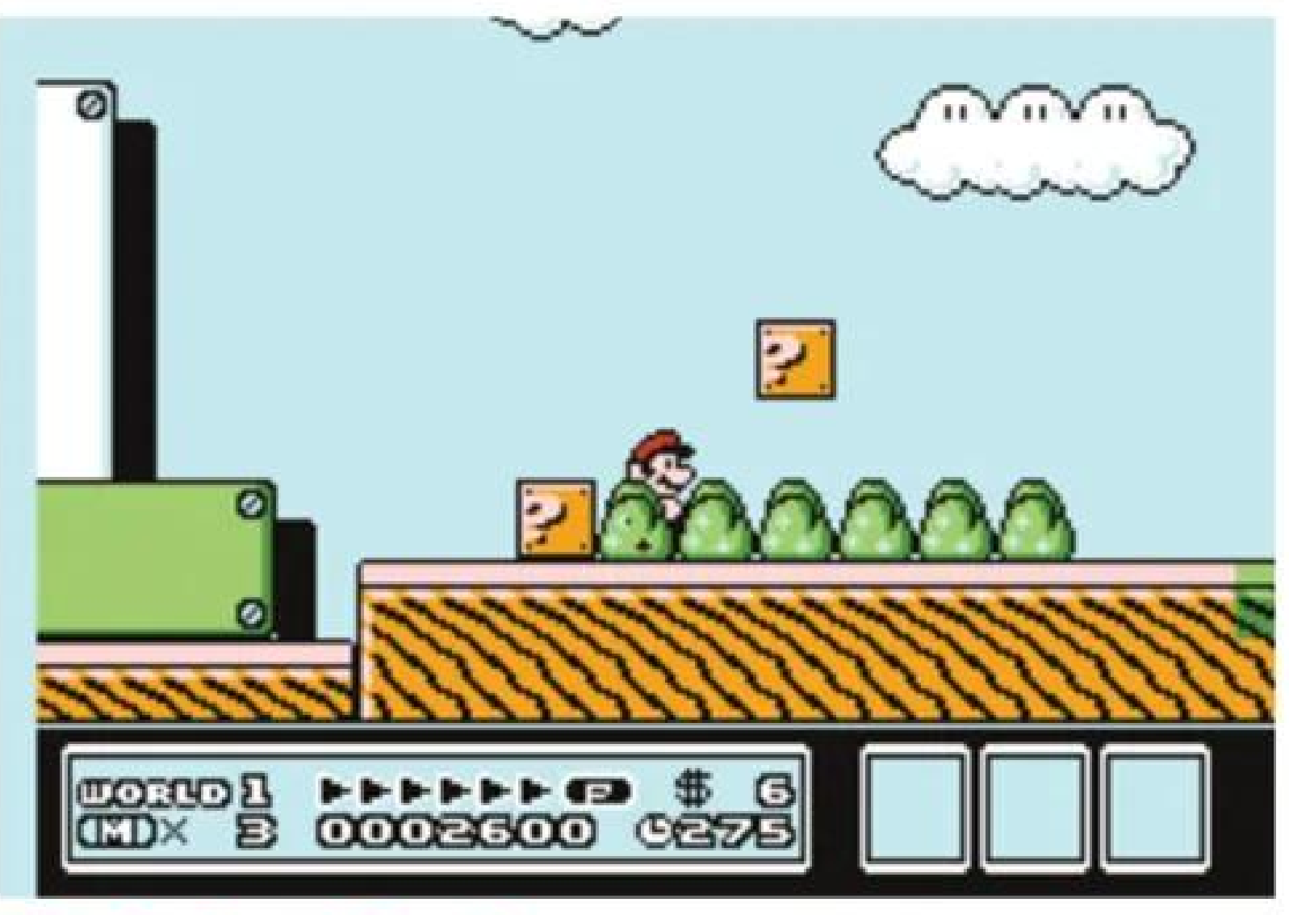
Memorable Moments

We present the best bits of the best NES game Nintendo ever made

Curtain Call

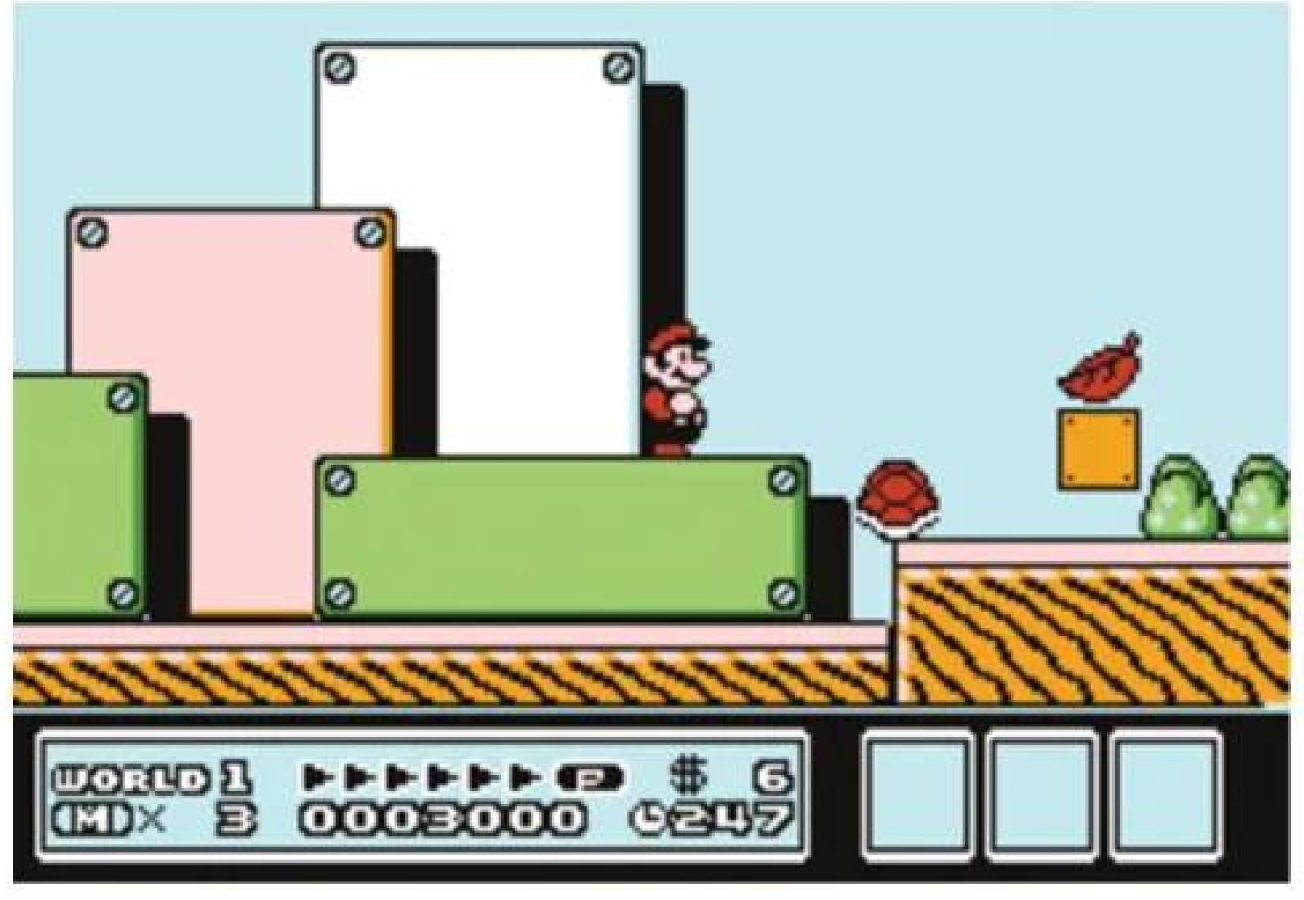
The intro to *Super Mario Bros 3* presents the entire game to the player as though it were a stage production, complete with spotlights and huge curtains. It's a weird premise that's never really explained, but it is one of the most memorable and iconic openings to any NES game.





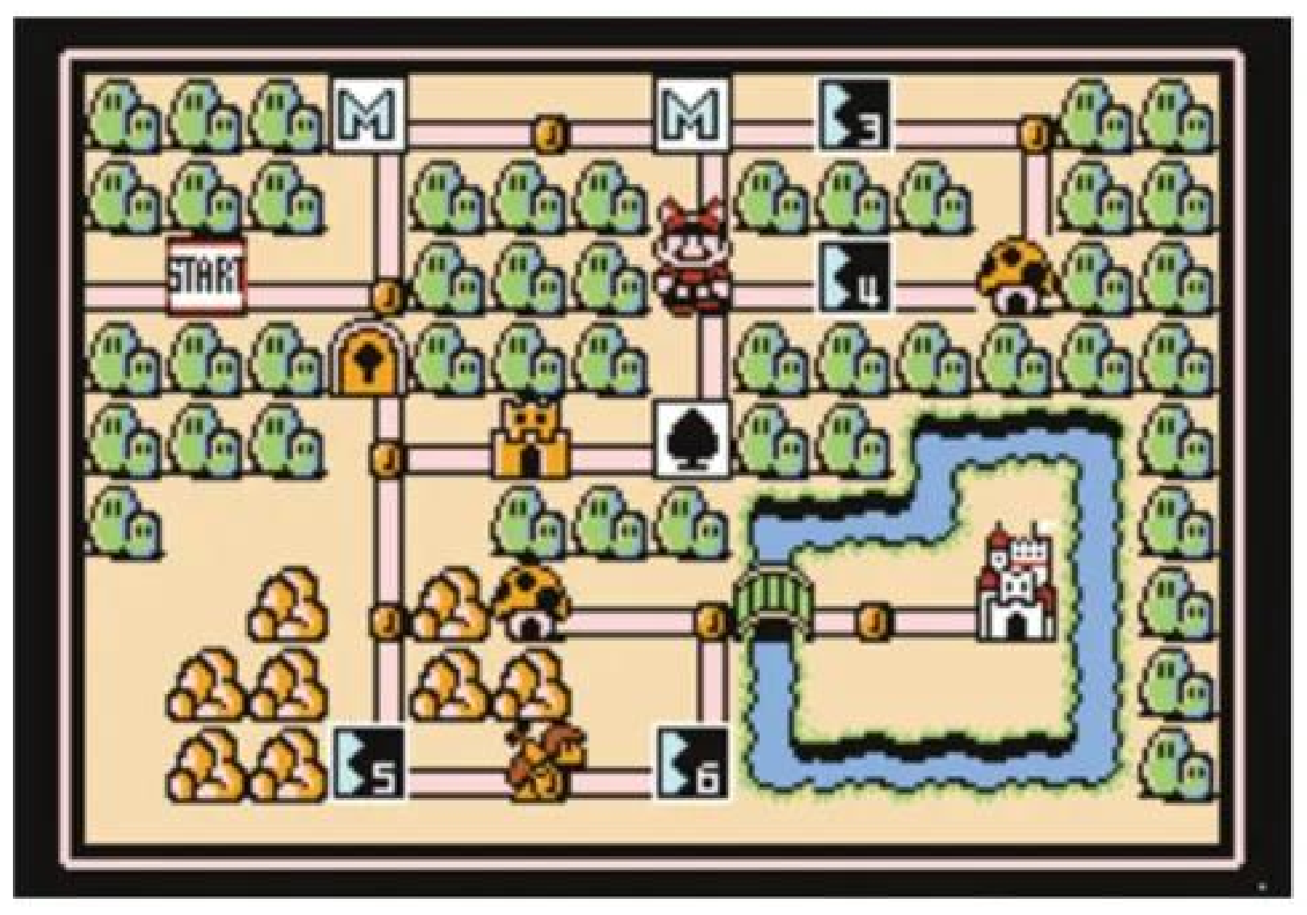
Hide And Seek

Crouch on any white block for a few seconds and Mario will fall off it and into the background layer of the stage. Sometimes it's just for fun; other times it can actually lead Mario to a very cool secret.



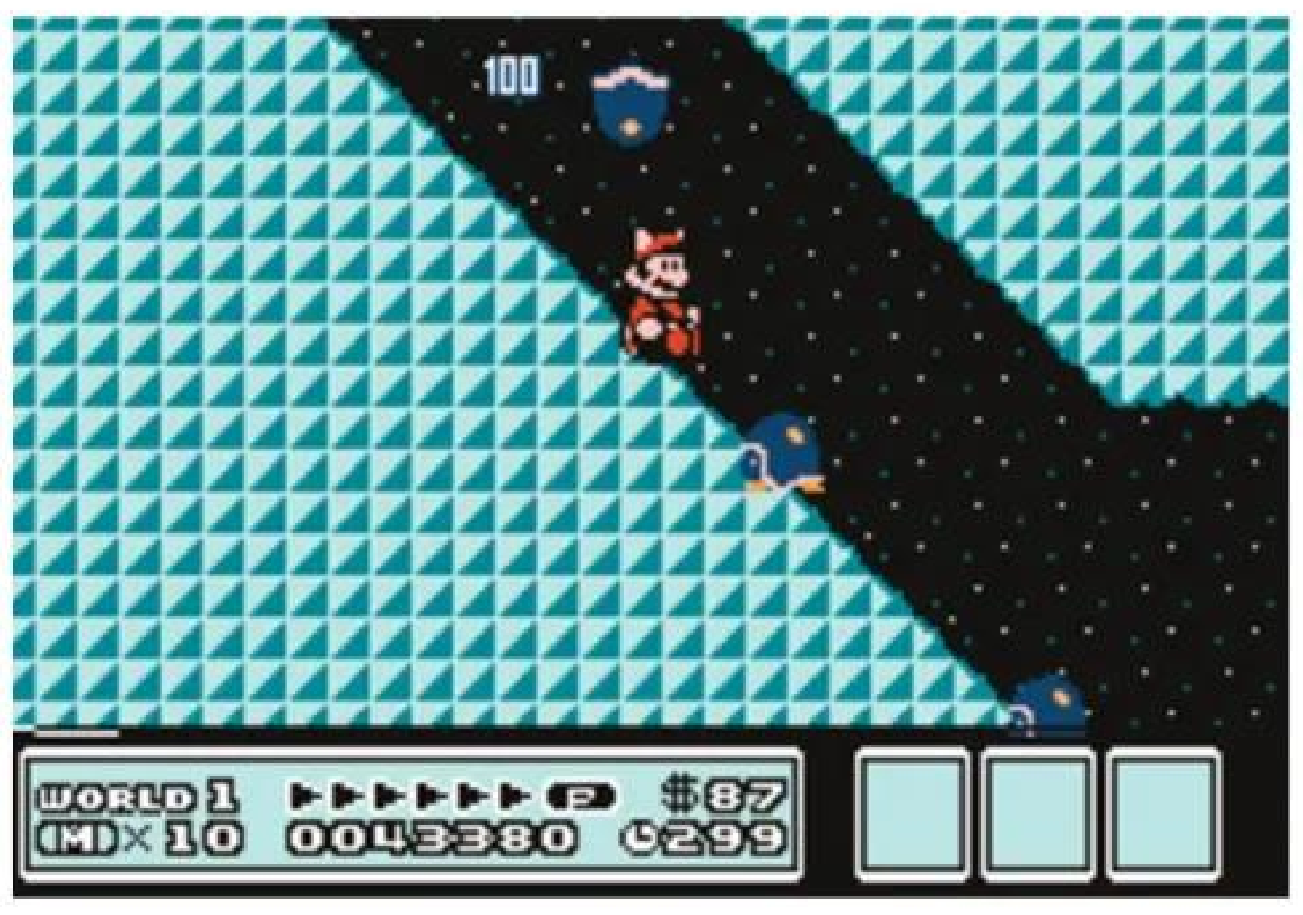
Question Blocked

A Question Block sits on the ground in the first stage, befuddling *Super Mario Bros* players who are only used to hitting the blocks from below. The solution: get a Koopa shell and throw it into the block. Genius.



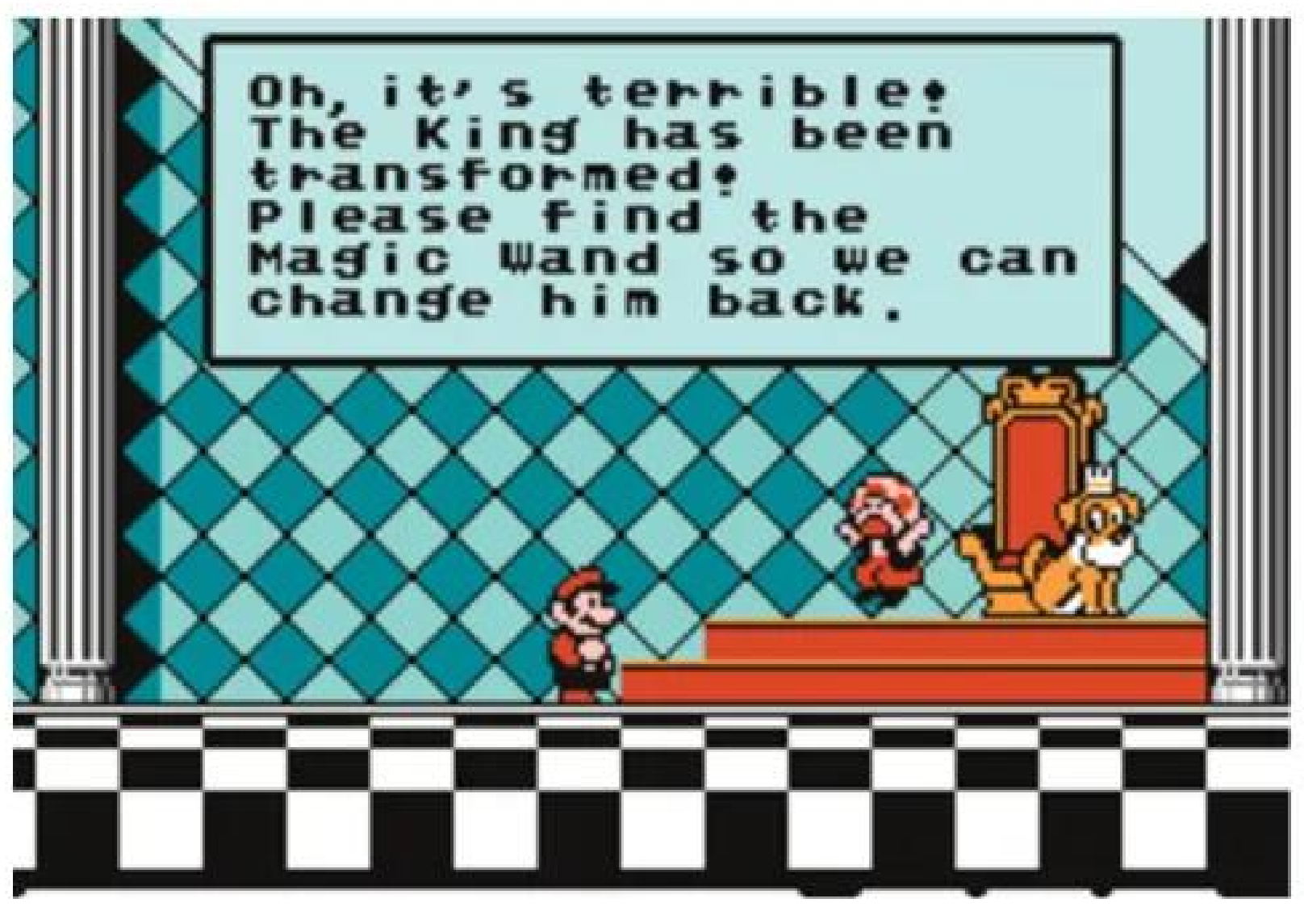
Non-Linear

Get to a certain point in the World 1 map screen and it suddenly dawns on you that there's now a significant element of choice in *Super Mario Bros 3*. Four different options are available at this first junction alone.



Bum Rush

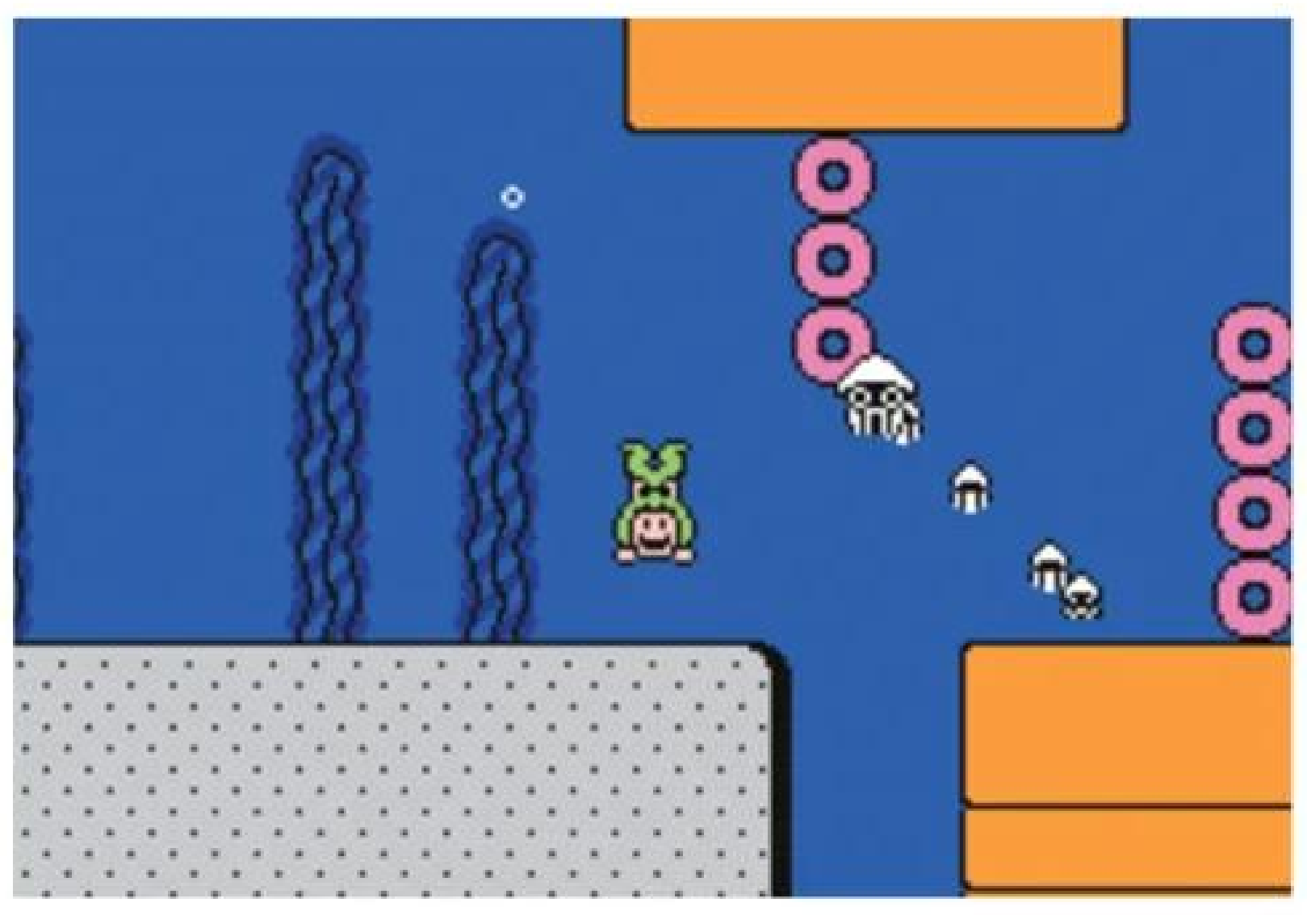
Pick up some speed and hold down on a slope like this and Mario will slide all the way down on his backside, taking out any enemies he hits during his descent. It's the sort of satisfying moment that *SMB3* does best.



Oh, it's terrible!
The King has been
transformed!
Please find the
Magic Wand so we can
change him back.

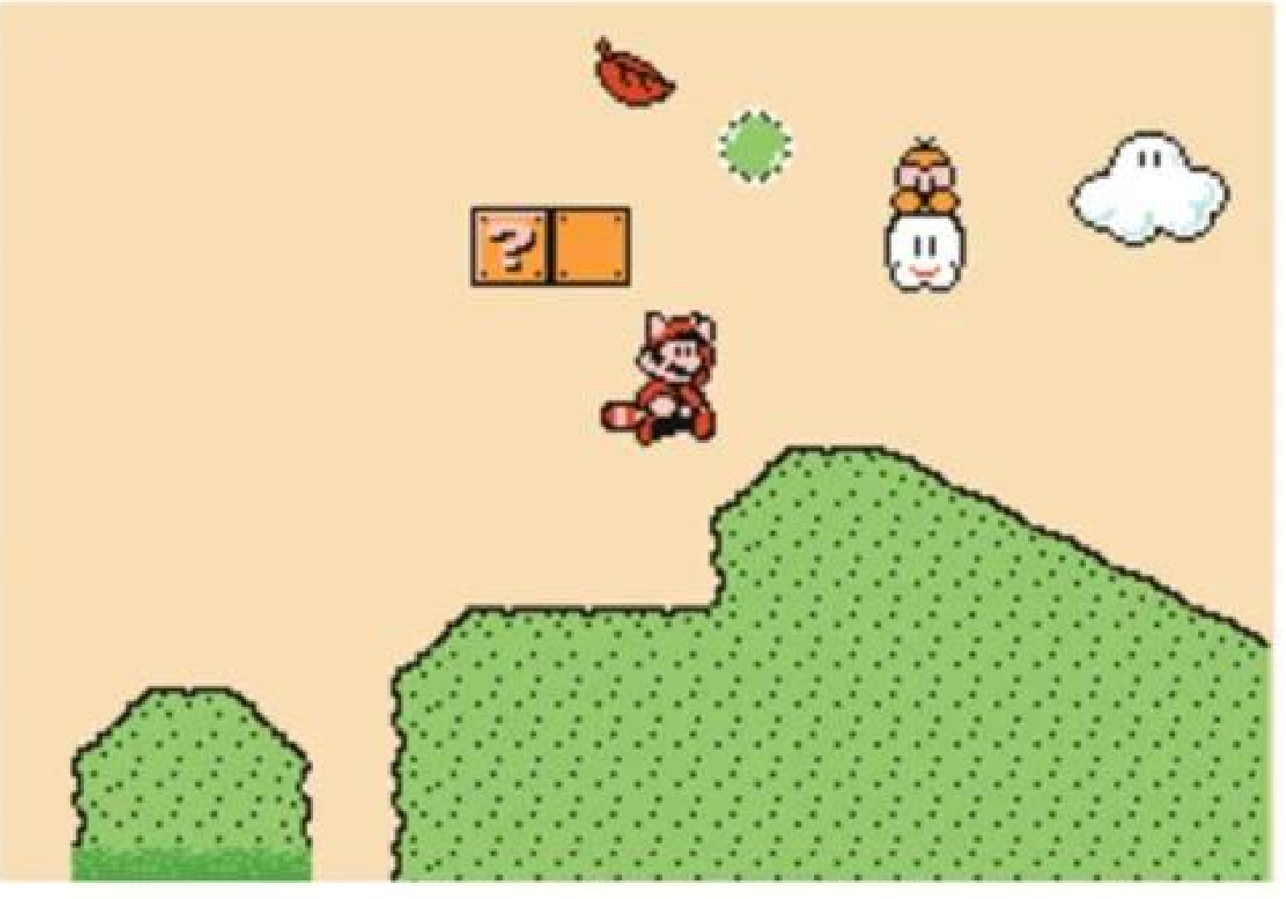
'King Idiot

Cut-scenes in a 2D *Mario* game? Can you believe it? These pre-boss battle scenes were pretty cool, though, always showing the King of the Mushroom Kingdom transformed into something humiliating.



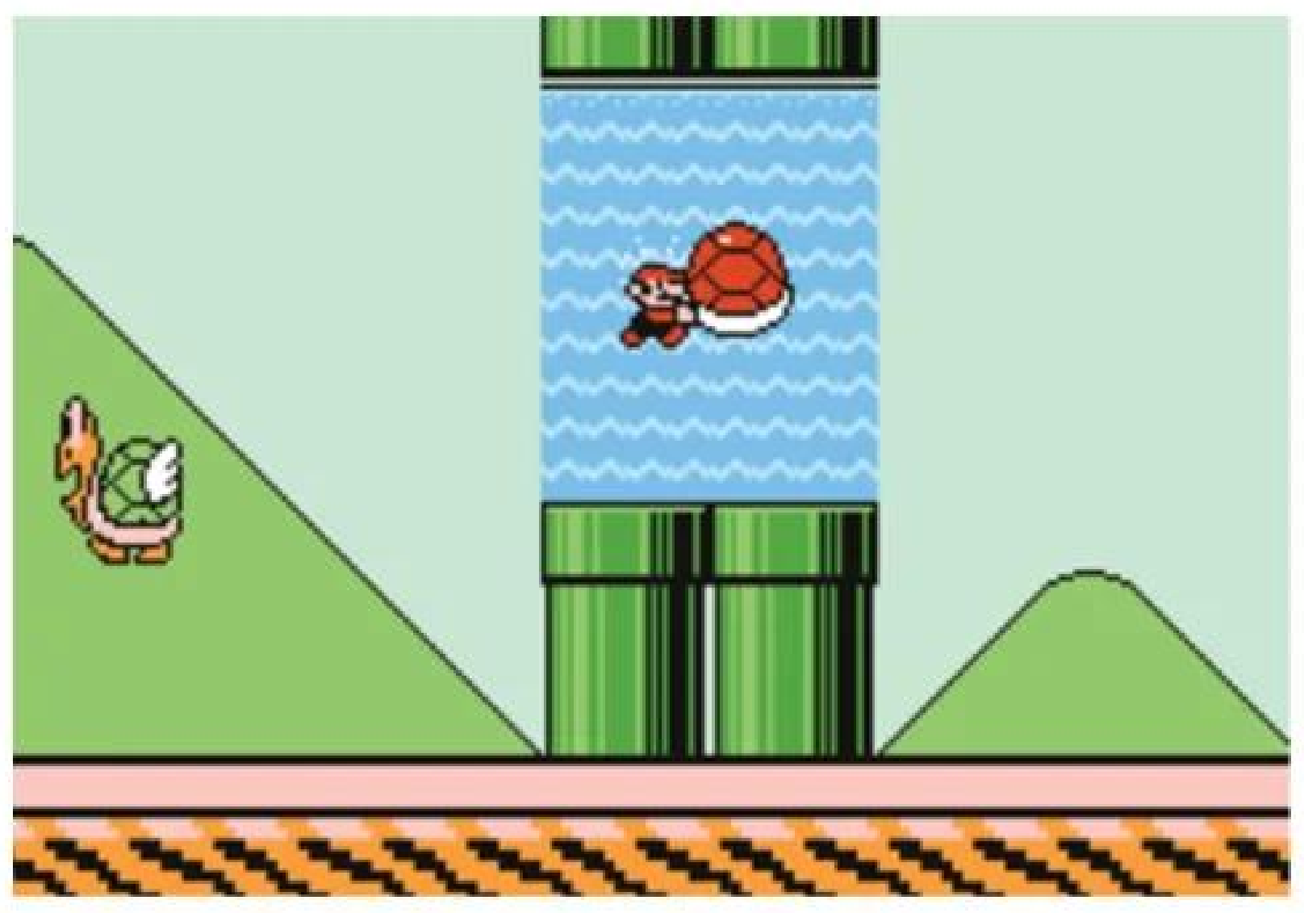
Hopping Mad

Super Mario Bros 3's Frog Suit is one of the most iconic power-ups of all time and was the stuff of legend back in the NES days. It felt so cool to mess around with, exploring underwater with fewer of the normal limitations.



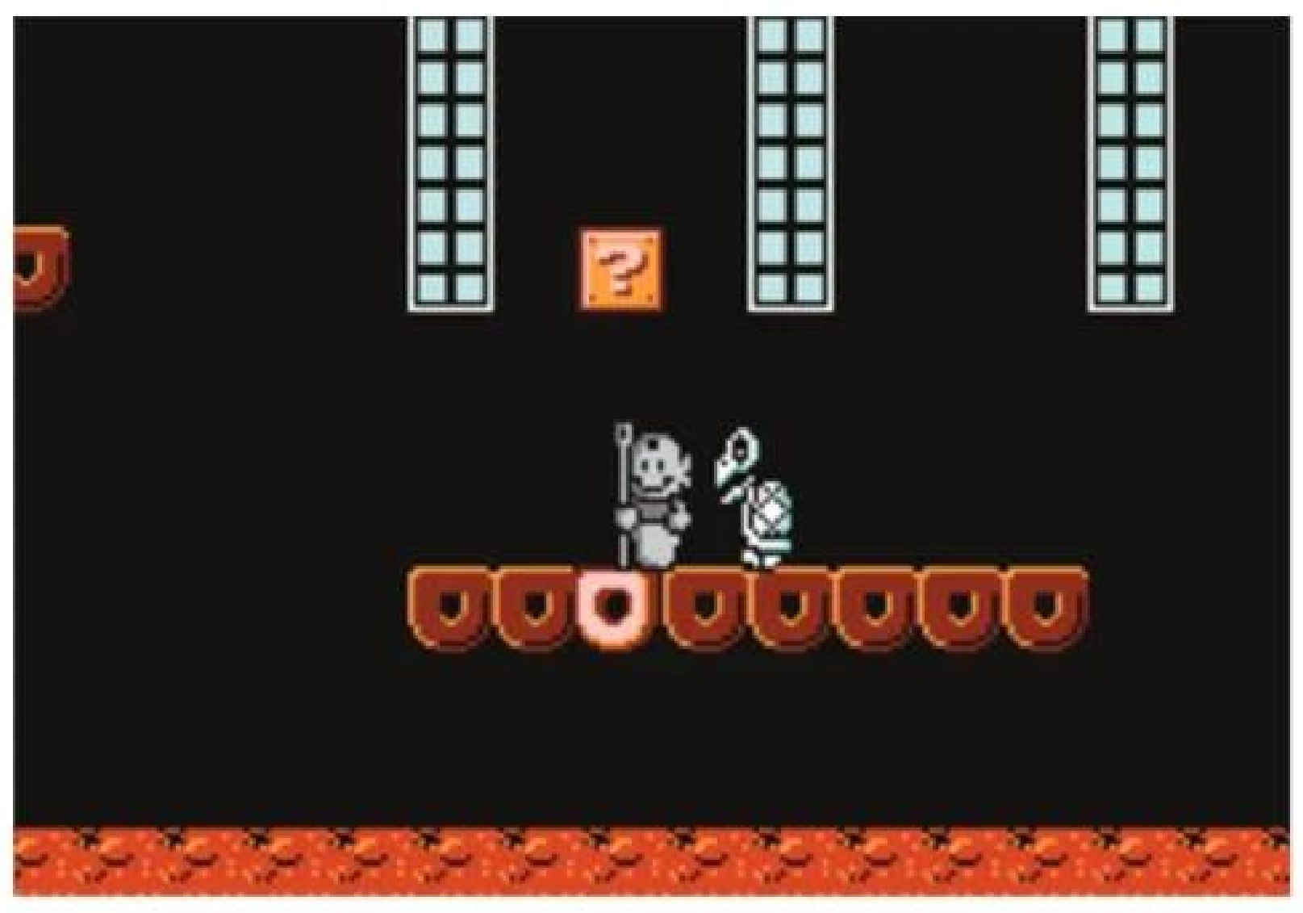
An Old Friend

Lakitu makes his return in *Super Mario Bros 3*, but we wouldn't call it a 'long-awaited' one. He's still an annoying little nuisance. His later relegation to cameraman and traffic light holder couldn't come soon enough.



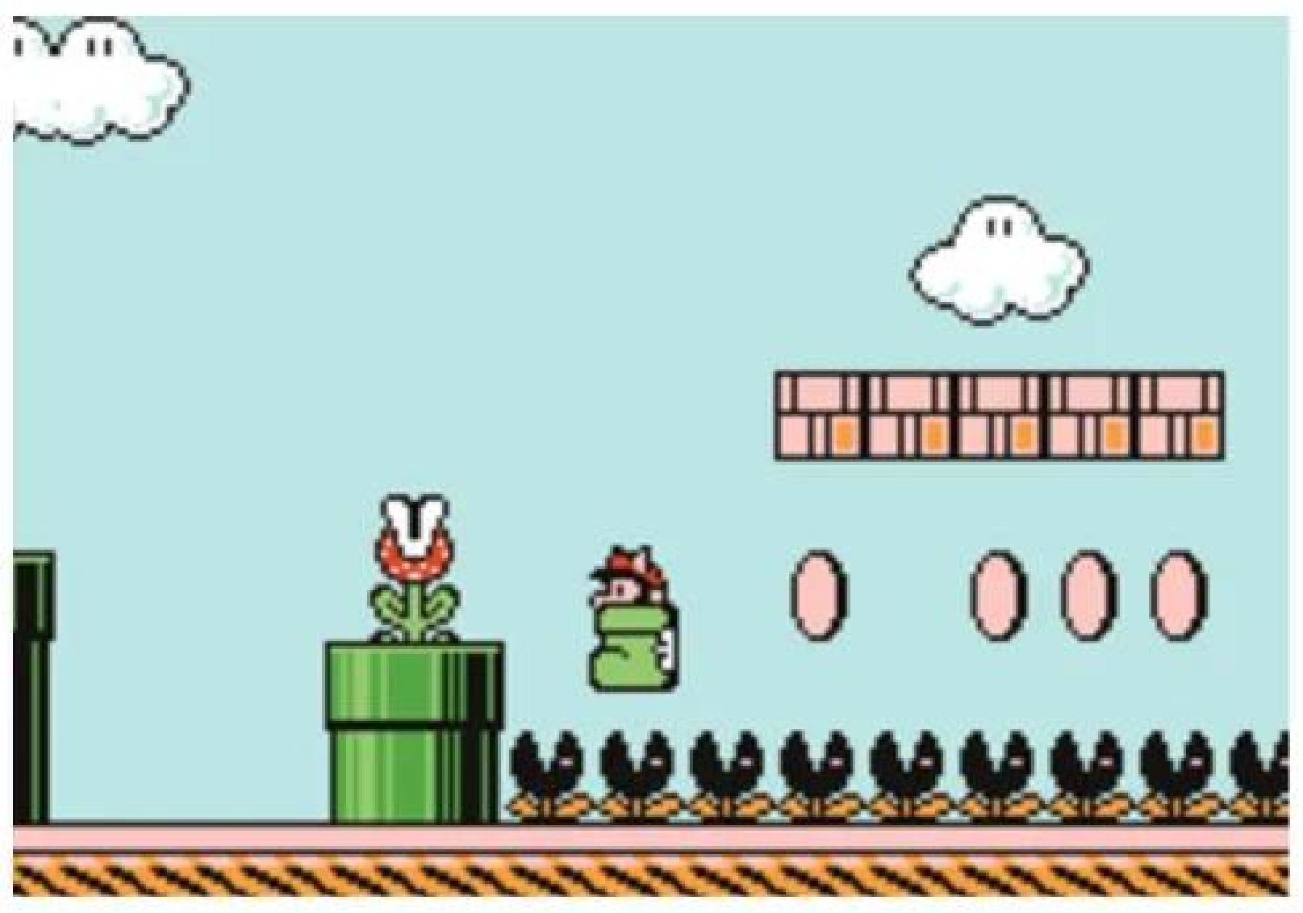
LittleBigMario

World 4's oversized level designs had a real wow factor in the NES days, even though they were really quite simple. The concept is so well-loved, though, that it was recently revived for *Super Mario Galaxy 2*.



Statue Mario

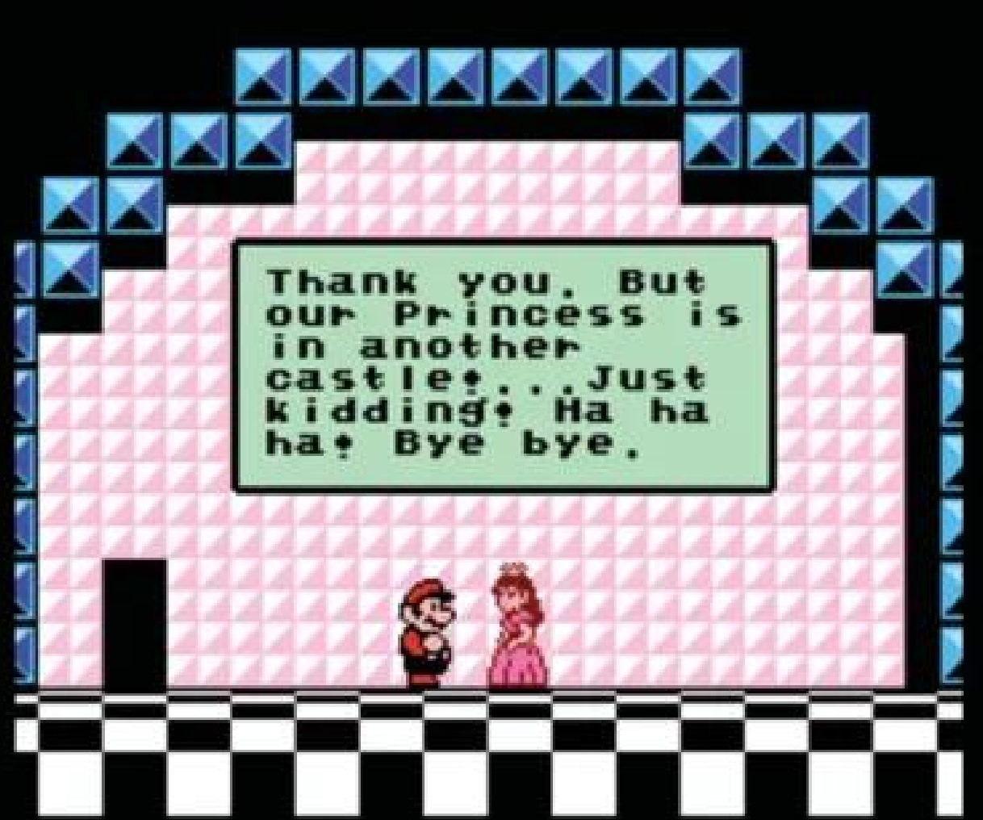
The Tanooki Suit is an enhanced form of Raccoon Mario that gives him fur all over in addition to the ears and the tail. Hold down and B while wearing the suit and Mario will turn into a statue, making him invincible.



Suited And Booted

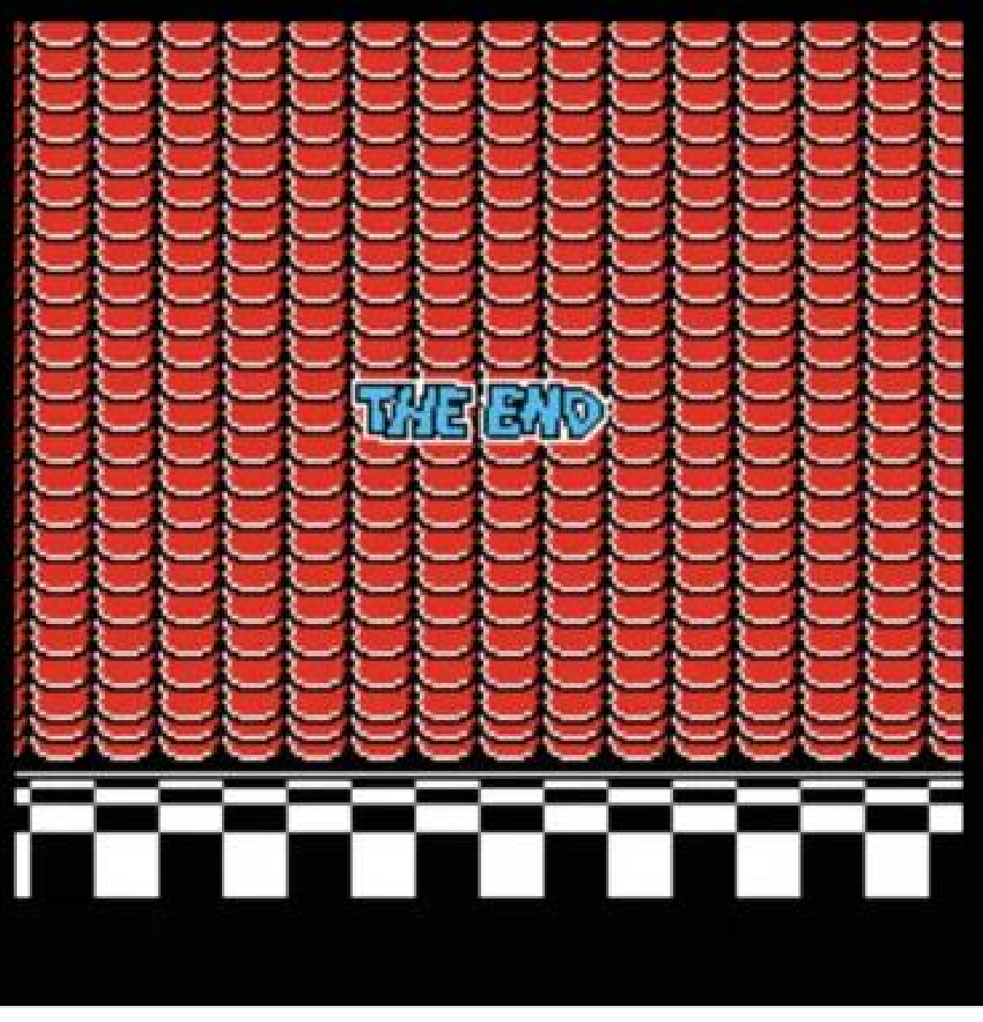
The Kuribo Shoe is probably the rarest item in *Super Mario Bros 3*, only appearing in a couple of levels. It also has to be one of the weirdest power-ups in a *Mario* game. Do you think there's an old woman and her family in there too?

> The ending to Super Mario Bros 3 isn't without its sense of humour, as Princess Peach demonstrates. Cheeky bugger!



Thank you. But
our Princess is
in another
castle!...Just
kidding! Ha ha
ha! Bye bye.

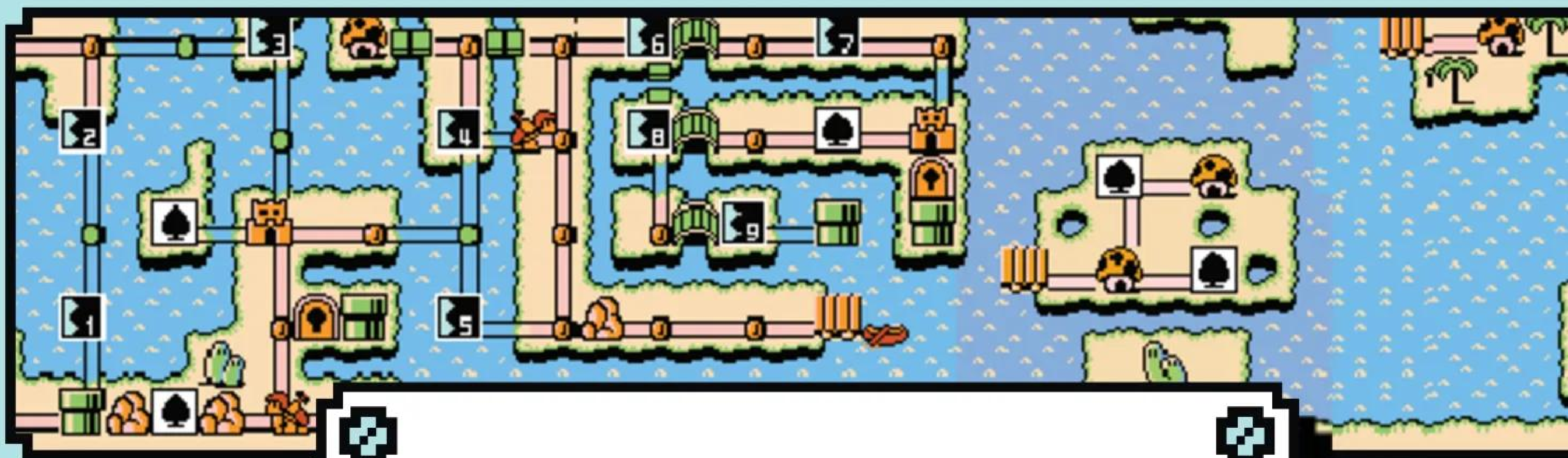
WORLD
4
BIG
ISLAND



ULTIMATE GUIDE:

World Tour

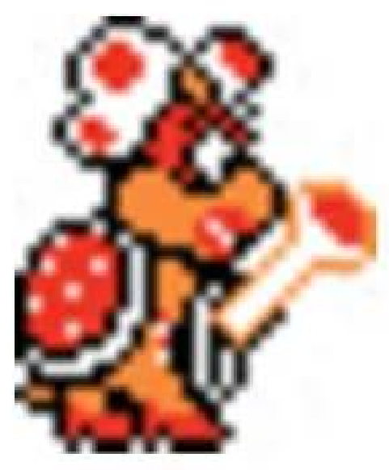
The Mushroom Kingdom has been represented in many different ways throughout *Mario* history, but *Super Mario Bros 3* was the first time it was presented in so much detail. Here's how it stacked up, from interactive map screens to the levels themselves and their climactic boss battles.



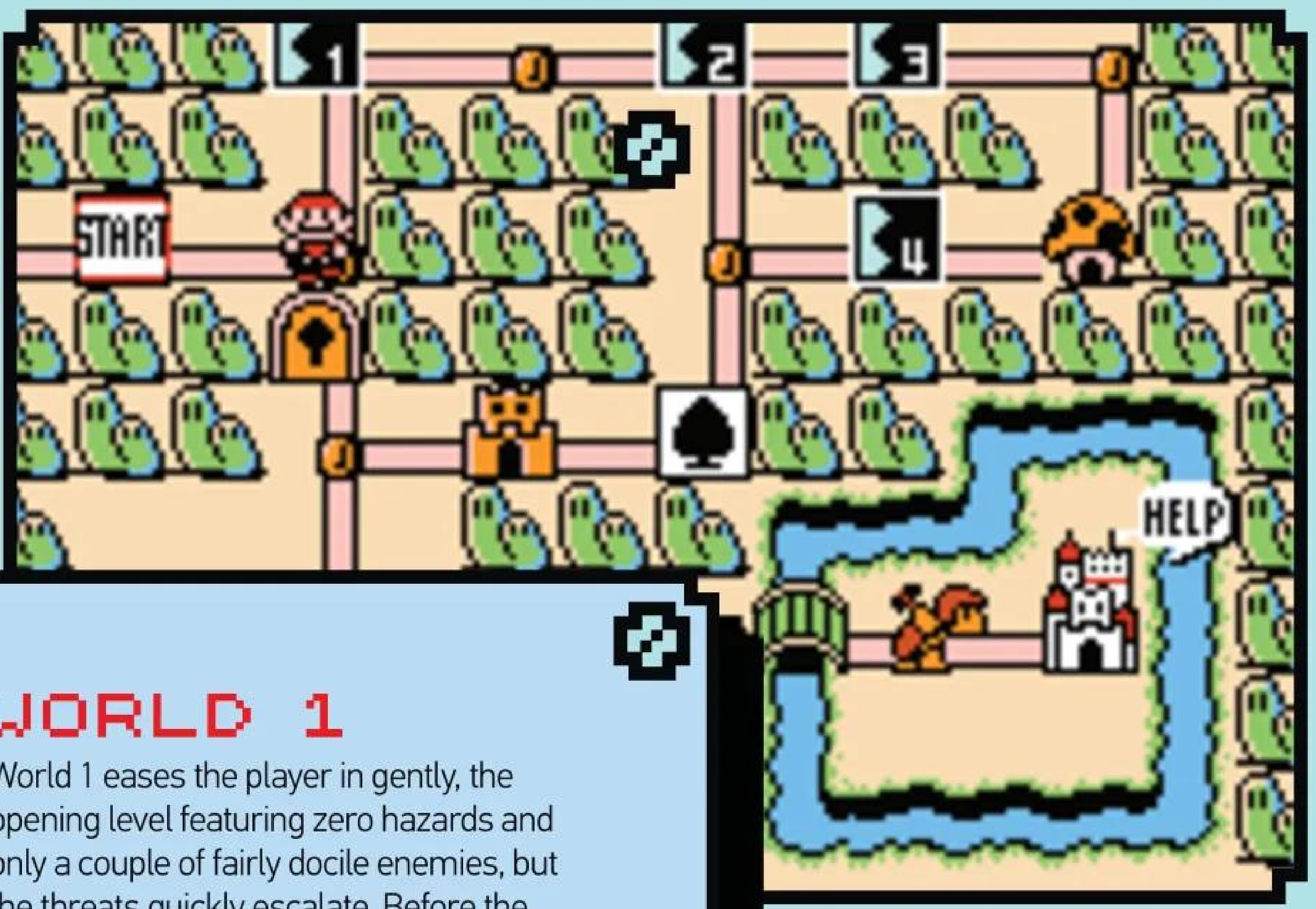
WORLD 3

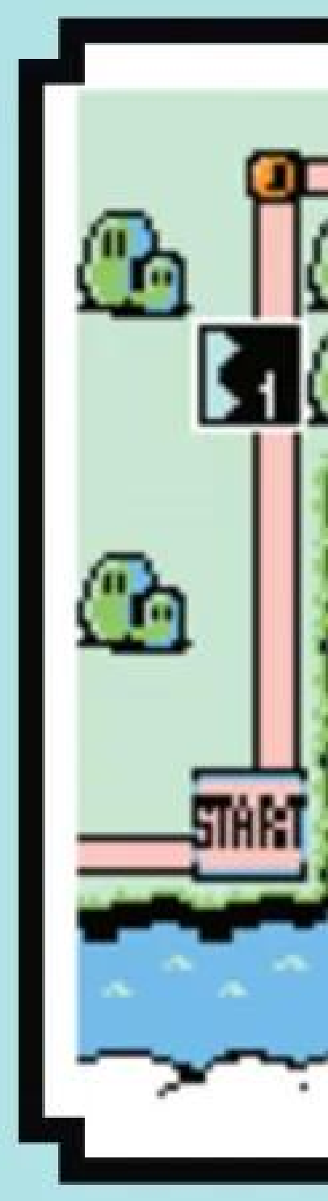
The third world is almost entirely made up of water-based levels, always some of the trickiest stages in *Mario* games, especially when there's a giant fish leaping out of the depths in an attempt to swallow him whole. Thankfully, however, our hero has a new trick up his sleeve in the form of the Frog Suit, which grants him enhanced swimming and jumping abilities.

BOSS: Wendy



Bowser's only daughter awaits Mario at the end of World 3, and she's no princess, let us tell you. Like her brothers, her weapon of choice is a wand, and this one fires what look like life rings. Wendy is named after Wendy O Williams, lead singer of punk outfit The Plasmatics.

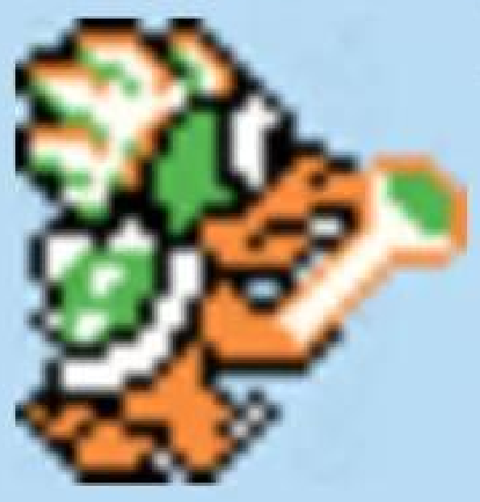




WORLD 1

World 1 eases the player in gently, the opening level featuring zero hazards and only a couple of fairly docile enemies, but the threats quickly escalate. Before the world is through you'll have contended with slippery ice slopes toward oblivion, an assault from the pesky Boomerang Bros, and a madcap dash through an airship as cannonballs shoot at you from all directions. Phew!

BOSS: Iggy

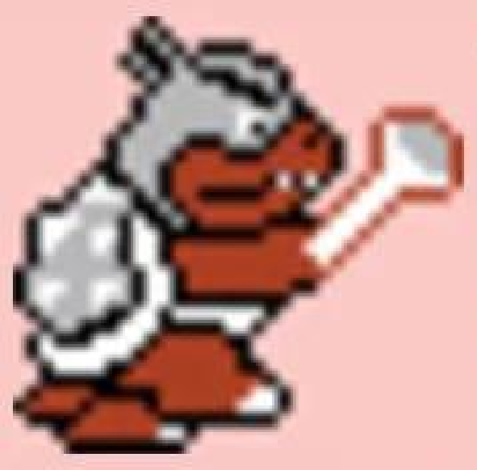


One of Bowser's seven children known as the Koopalings, Iggy is named after real-life rocker Iggy Pop. But that's not a microphone in his hand: it's a deadly magic wand that he wants to shoot at Mario. Thankfully, he's quite easy to dodge and, a trio of head stomps later, he'll be out of the game.

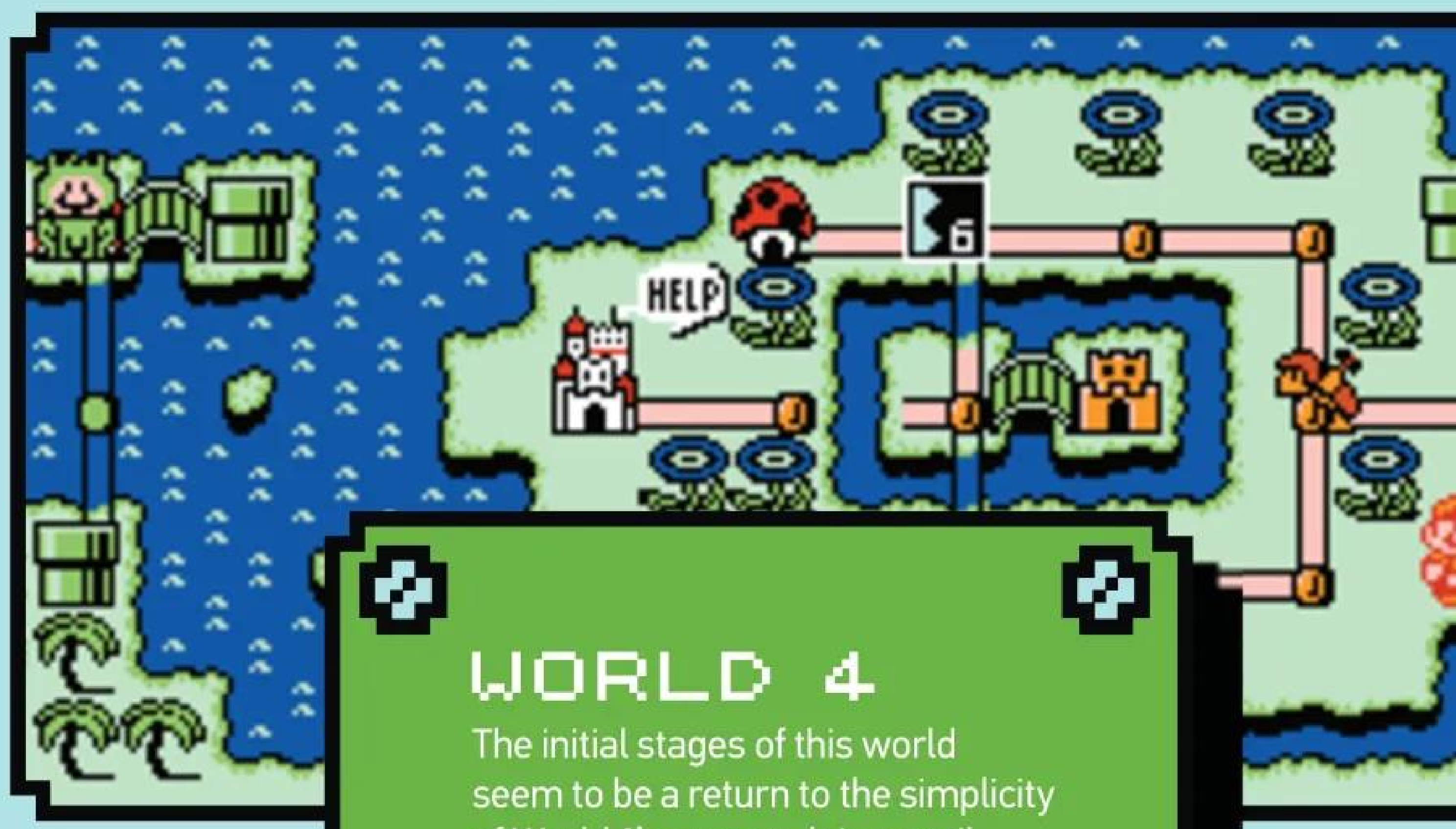
WORLD 2

World 2's desert landscapes throw some truly unexpected enemies at you, including a teeny tiny Goomba that hides underneath blocks of sand. One level introduces the now-customary Boo enemy, a ghost that will stop pursuing you as long as you look it in the eye. And in another stage you're even attacked by the sun itself. Weird.

BOSS: Morton



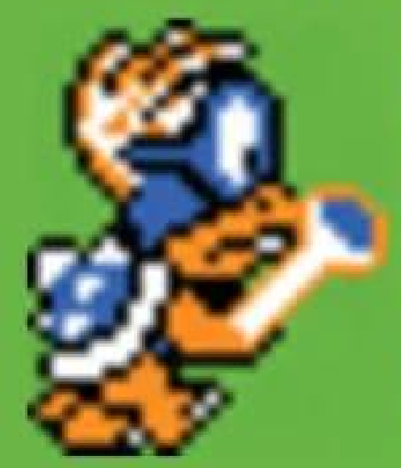
Not that much more troubling than his brother Iggy, Morton also wields a wand but is able to throw out multiple bouncing projectiles at once. Also named after a real-life musician, he takes his name from American singer and talk show host Morton Downey Jr.



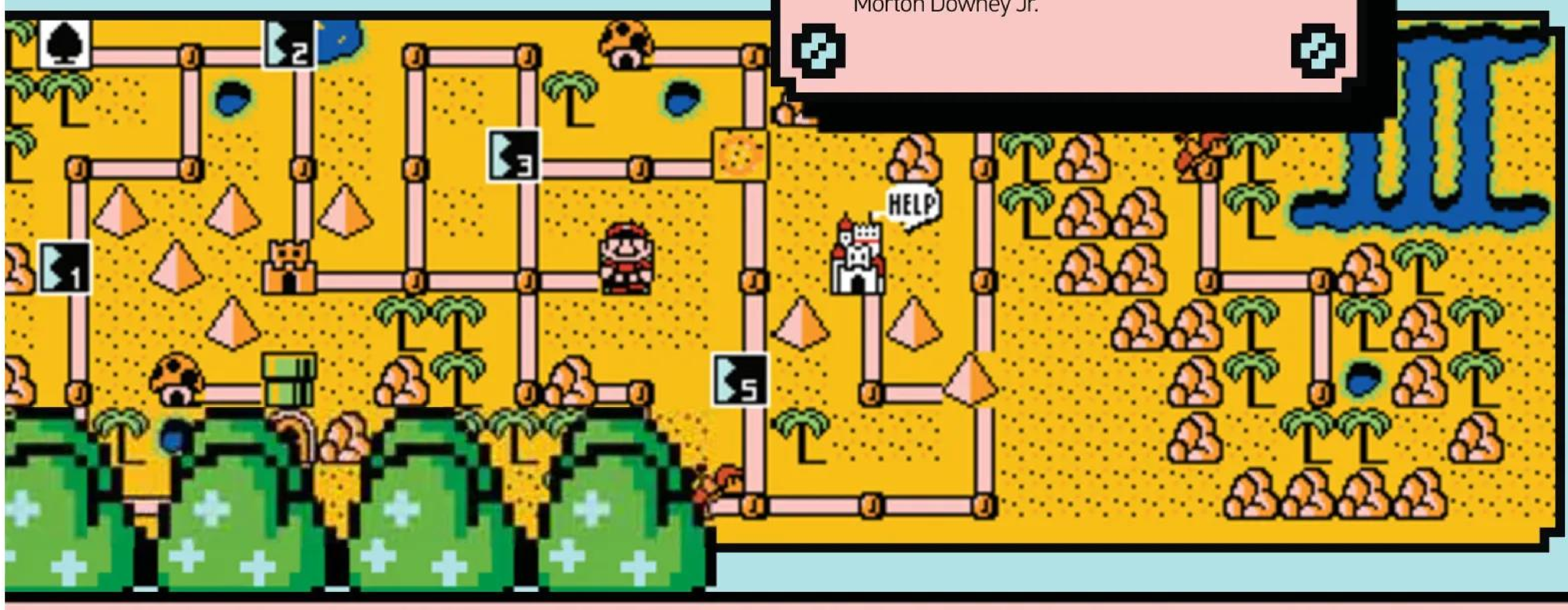
WORLD 4

The initial stages of this world seem to be a return to the simplicity of World 1's grassy plains, until you see the enemies, who are now several times bigger than ever before. Thankfully, however, lots of other things have grown in size, including the clouds, which are now big enough for Mario to safely jump onto.

BOSS: Larry

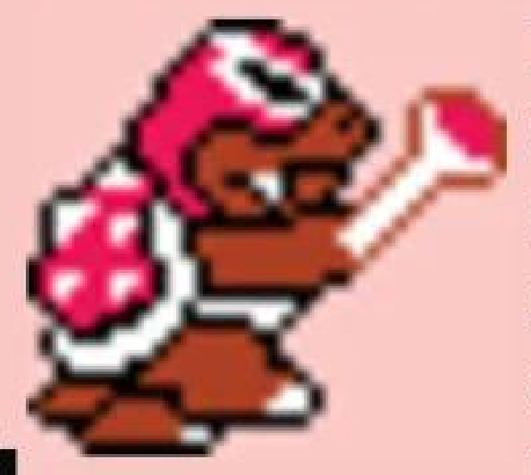


Another boss, another Koopaling, another boring old magic wand. There's not much challenge here, but World 4 itself is tough enough that you'll welcome the downtime. Larry is the only Koopaling not to be named after a musician. Instead, he's named after talk show host Larry King.



WORLD 5

While the first half of the fifth world takes place in familiar grassland territory, the second half sends Mario up into the air to explore the clouds. Being so high up, however, means only one thing: lots and lots of bottomless pits to fall into.

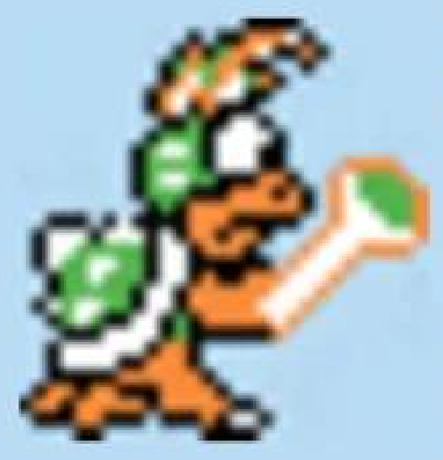


BOSS: Roy

One of the most dangerous of the Koopalings, Roy is able to stomp on the ground, sending out shockwaves that stun Mario into submission for a few seconds. Best to stay in the air, then. He's named after Roy Orbison. Of course.

WORLD 6

World 6 is where things really start to get tough. Icy surfaces, spiked floors and multiple enemy types all crowded into the screen make it very easy for Mario to meet his demise if you don't keep precise control over him at all times. Prepare to use a fair few continues in this world.

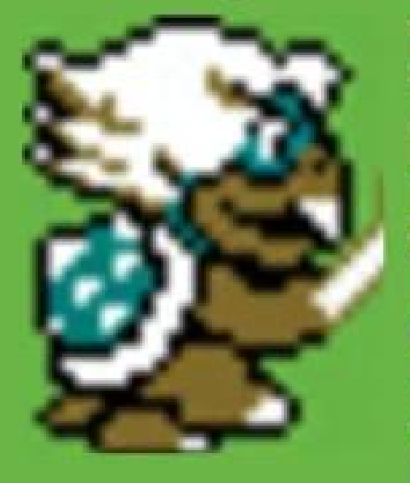


BOSS: Lemmy

Riding around on a huge rubber ball, Lemmy causes trouble for Mario by launching several other bouncy balls at him. It's utter chaos and pretty difficult to get through in one piece. We'll forgive Lemmy, though, simply because he's named after the legendary lead singer of UK metallers Motörhead.

WORLD 7

The penultimate world takes Mario back to his roots, with entire levels constructed from pipes. A double-edged sword: some pipes lead to beneficial secret areas while others simply house annoying enemies. Tread carefully, Mario.

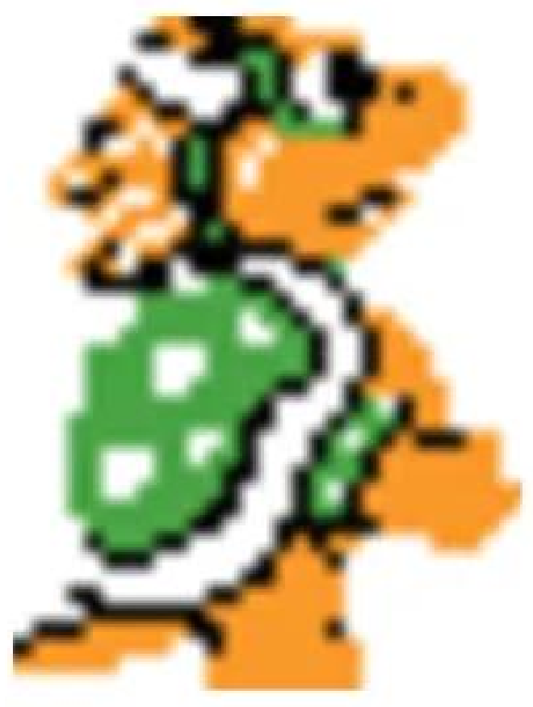


BOSS: Ludwig

Second in command to Bowser himself, Ludwig is so heavy that every footstep is as powerful as Morton's stomps. He's named after Ludwig Van Beethoven, which was a source of amusement in the Mario cartoons as he tried and failed to compose pleasant classical music.

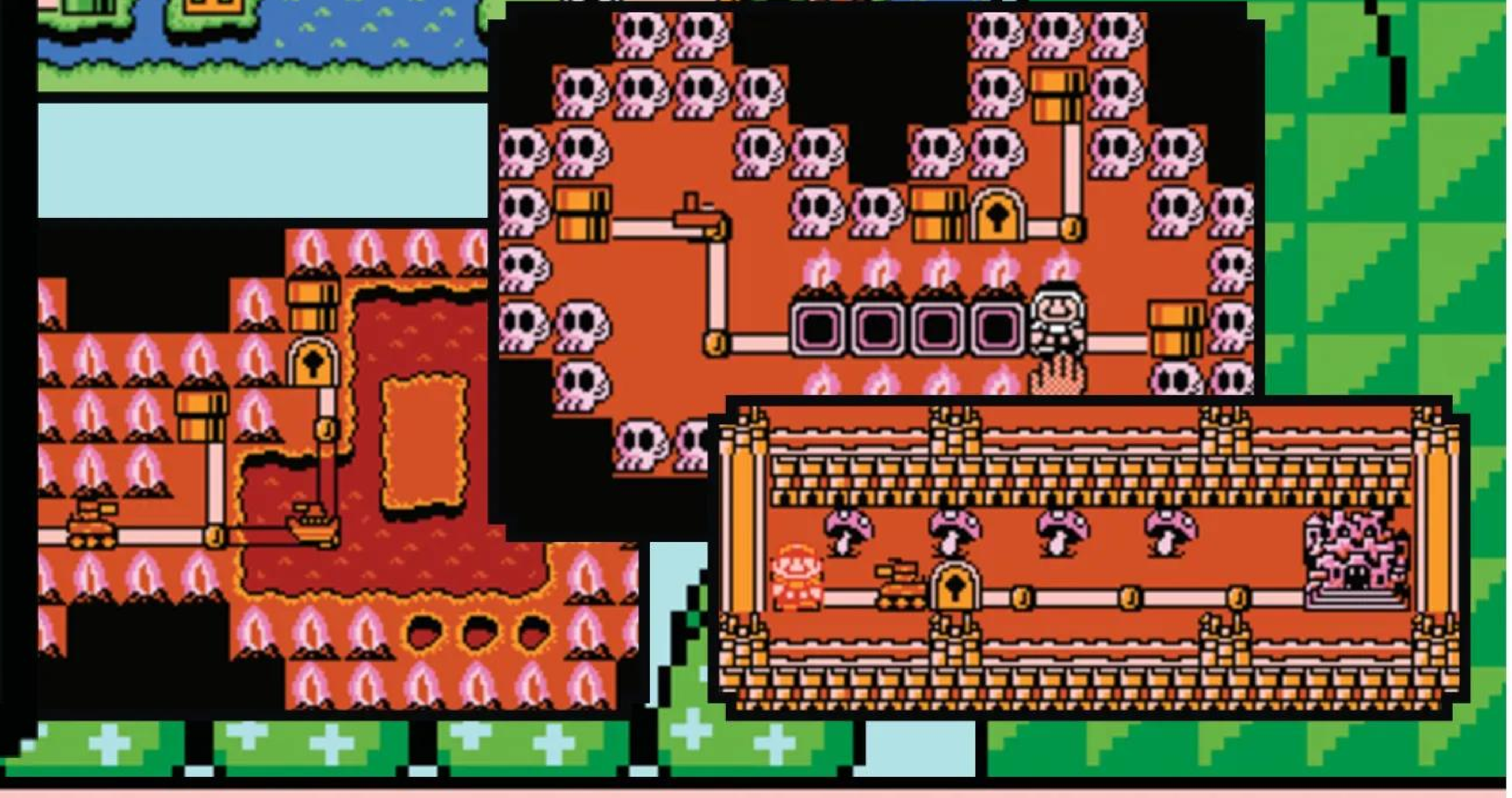
WORLD 8

Anyone who used Warp Whistles to cheat their way to the final world soon found that their skills were nowhere near up to the challenge, as Bowser's army attacks Mario with a mile-long caravan of gigantic tanks. This level, and the handful that followed, are some of the hardest in Mario's history.



BOSS: Bowser

King Koopa himself awaits Mario at the end of World 8, and he's suitably tough to beat. You can't actually hurt him, so dodge his fireballs and try to get him to stomp in the middle of the stage. If he does it enough he'll break the floor and fall into the lava below.



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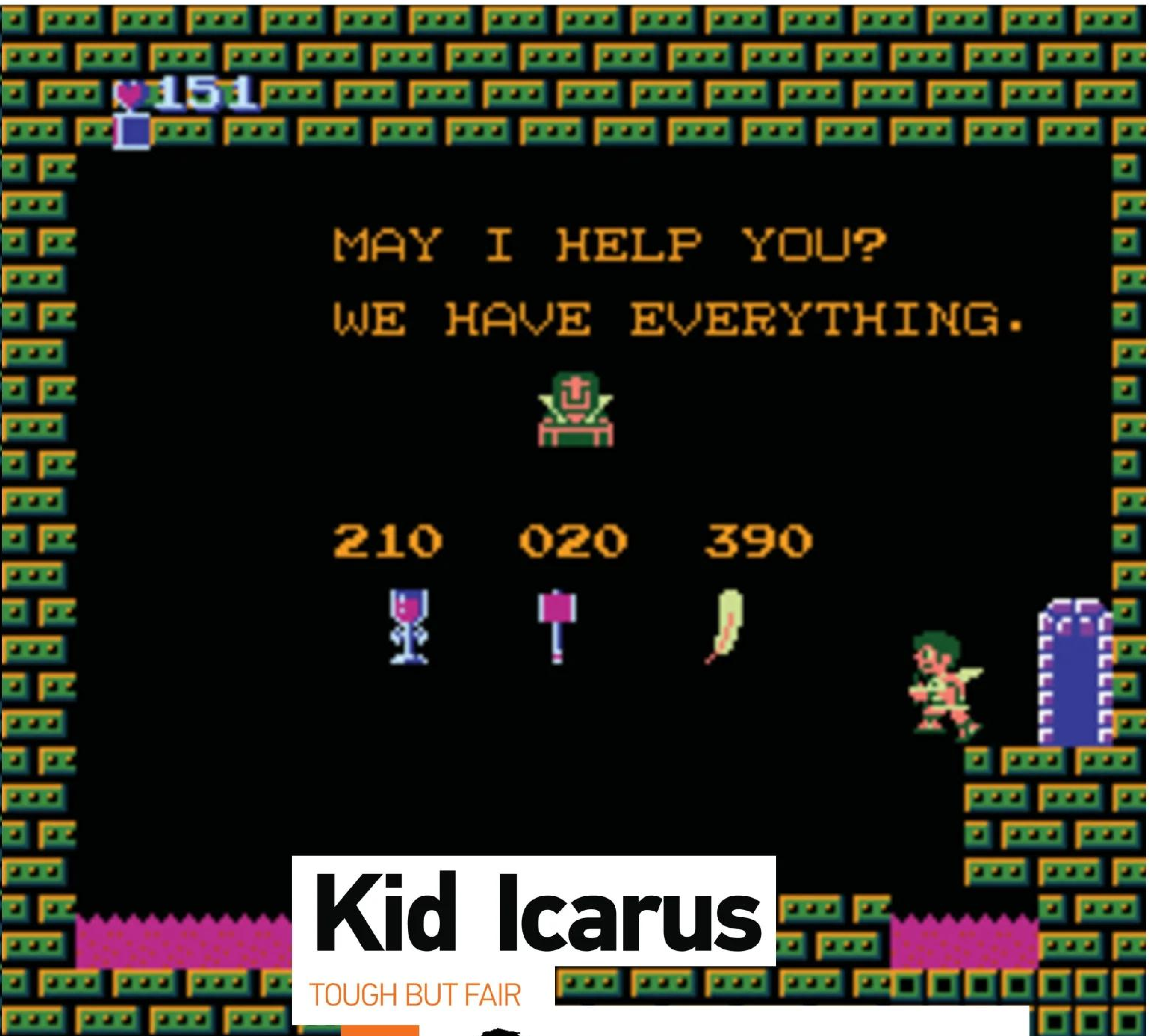
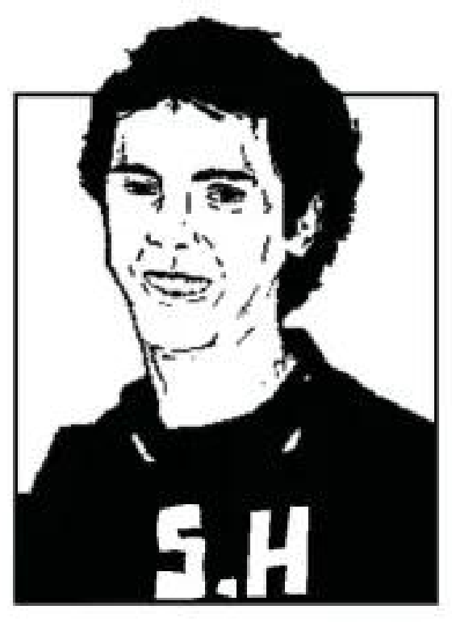


Kid Icarus

TOUGH BUT FAIR



» NES » 1986 » NINTENDO

There are some who regard *Kid Icarus* as an unsung hero of the NES. While I'd be the first to admit that the game looks and sounds pretty – thanks to it running from the same guts as *Metroid*, and having that sublime Tanaka music. For me, it's ever so slightly let down by some frustrating little design flaws. [But I love *Kid Icarus*! - Ed]

Kid Icarus still demonstrates that good ol' Nintendo template; creating a videogame based on three central characters: a good God, a bad God, who's been turned into an evil medusa by the good God, and an unlikely hero with a silly name.

Essentially trying to cram platform, shooting and RPG elements into one game and, for the mostpart, succeeding, *Kid Icarus* does undo a little of that greatness by throwing up a troupe of brilliantly drawn, but annoyingly cheap enemies that make you want to rip the cart from your NES and kick it at a furnace. Needless to say, practice is key.

Pit, your angelic hero, has to face off against an army of skeletons that will absorb a ridiculous amount of arrows, silly sporadic squids that miraculously appear from the base of the screen at the most maddening of moments and plenty of stupid drops that kill your character outright. But thanks to its levelling up and shopping elements, the further you get in the game the easier it gets, which I do like.

For the quest, Nintendo has bestowed us one measly life, which was probably its attempt to impart this jarring sense of realism. But when you're playing a videogame about an angel quashing a bunch of flying eyes and eggplants with arrow heads, it does feel a little unfair.

The game isn't a complete tool, however, as when you die, you can always fall back on its 24-digit, case-sensitive password system. Nintendo would soften the blow though by putting it to use on some brilliant cheat codes. Just input '8uuuuu uuuuuu uuuuuu uuuuuu' if you want to see the game's final Parodius stage – and see a fully powered Pit take to the skies and face off against a giant eyeball and its pet dragon. ✱

EASTERN BLOCKS

HENK ROGERS AND THE MAKING OF GAME BOY TETRIS

Alexey Pajitnov may have created Tetris but it was Bulletproof Software's Henk Rogers who battled through Soviet Russia and Nintendo boardrooms to bring the game to the masses. Ashley Day puts the pieces together...

“I first saw *Tetris* at the Consumer Electronics Show in Las Vegas, 1988,” says Henk Rogers, the man who had changed the gaming world once by introducing the RPG to Japan with Famicom’s *Black Onyx*. Little did he know that he was about to do it again by taking an amazing new Russian puzzle game and embarking down a path that would eventually bring that game to the masses. “I was going to trade shows looking for games to bring to Japan. Most of the games, you really can’t get a feel for how they play in such a short time. You stand in line, it’s your turn to play, you play a little and then you move on. Well by the time I’d played *Tetris* for the fourth time I realised I was hooked. I started going after the rights there and then.”

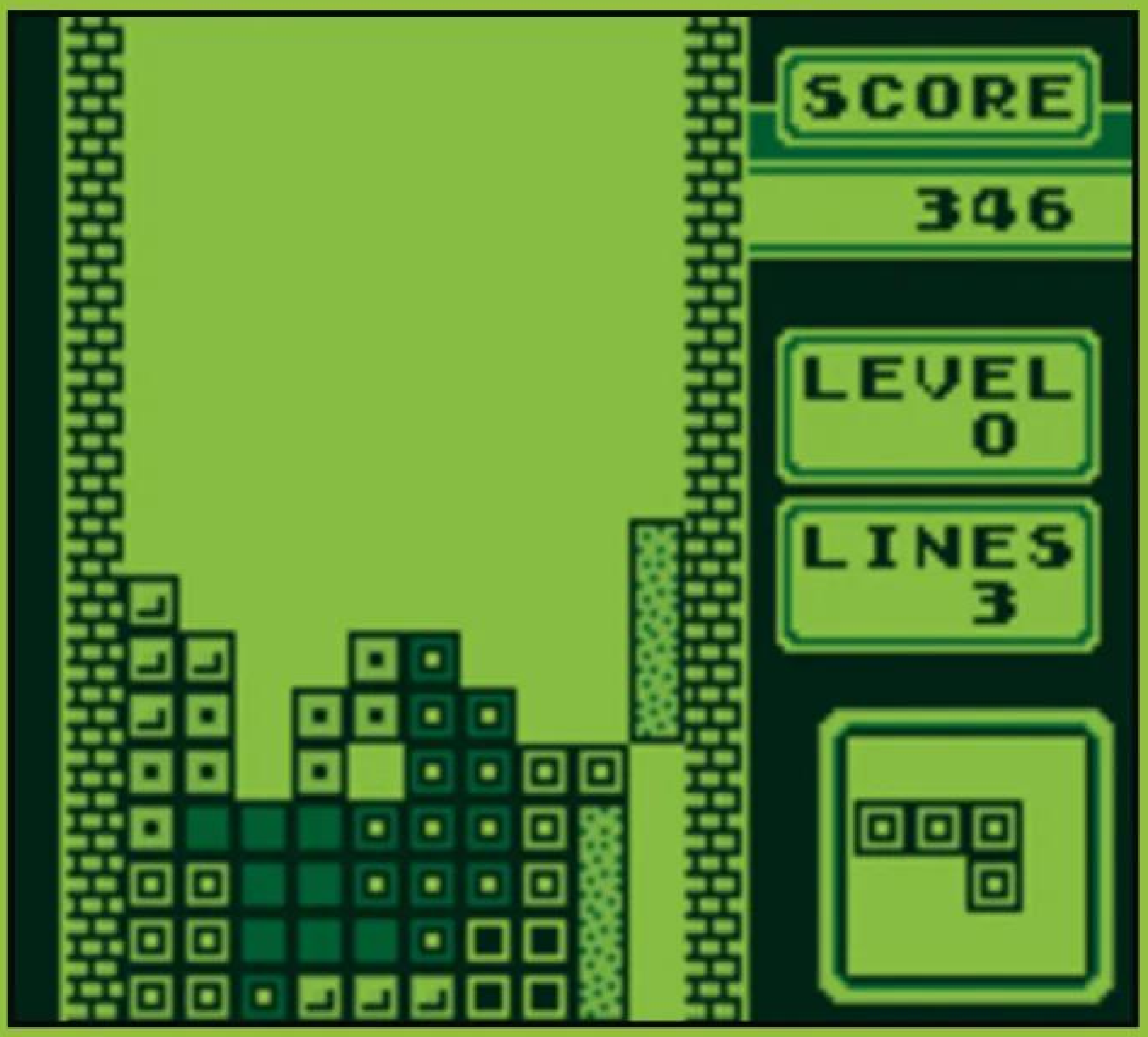
“I was unannounced, which never happened in the Soviet Union. You weren’t supposed to talk to anybody”

Before getting involved with the Game Boy edition, Henk secured the console rights to *Tetris* and produced a Famicom version for Nintendo. But initially, its success was far from assured. “That Christmas, *Tetris* had come out and I thought it was going to be a great opportunity,” remembers Henk. “But for a game to become a hit you really have to sell about 100 to 200 thousand in your first order, and I’d managed to get 40,000. That’s not even worth making. I went to [Nintendo president] Hiroshi Yamauchi and I said, ‘Listen, I think I have one of the greatest games of all time here. I don’t know what I’m doing wrong, maybe it’s my sales guy or my marketing guy is ineffective, whatever, but it’s off to a wrong start and I need your help, so can you do something for me?’

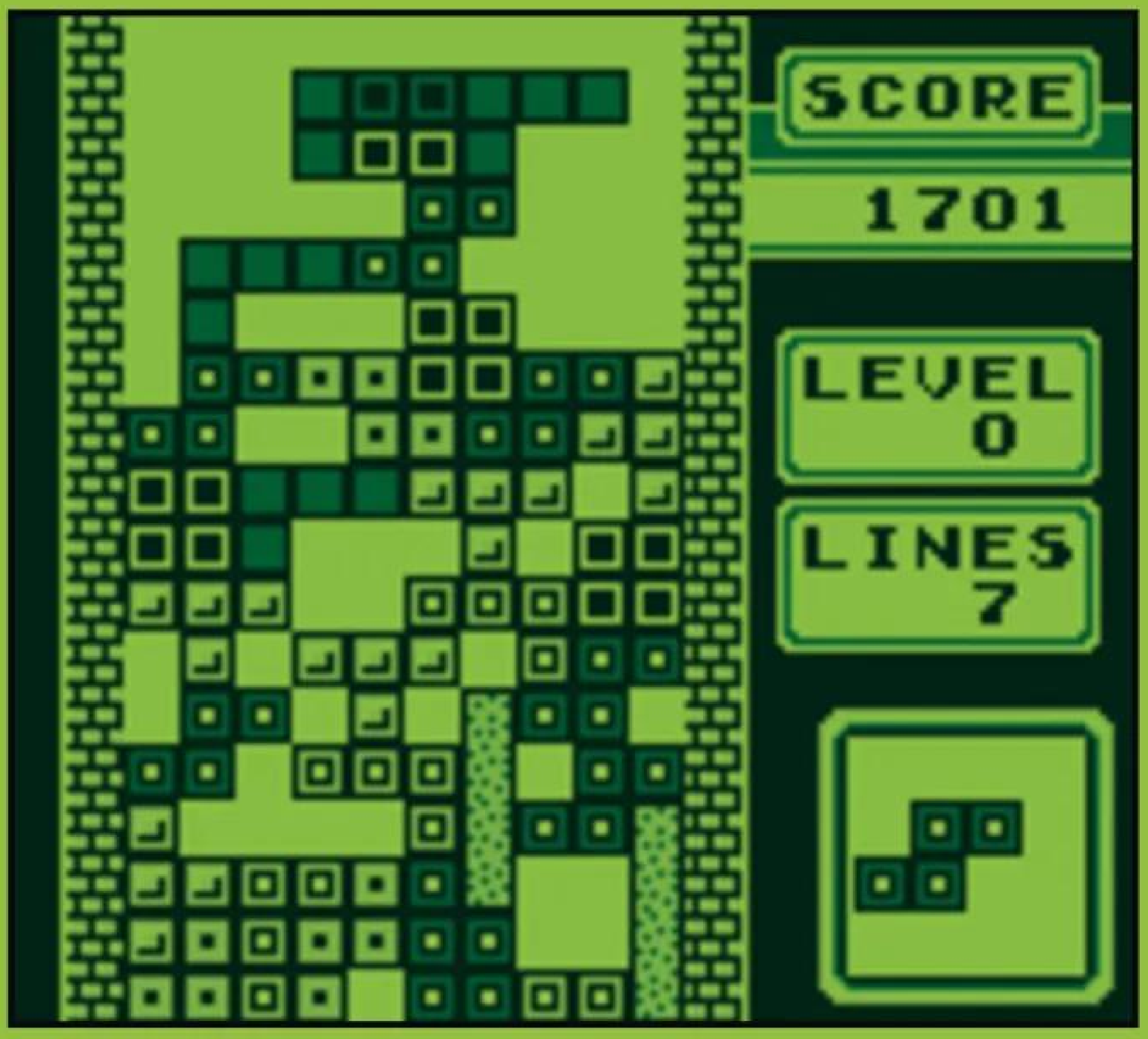
“He called in Miyamoto and said ‘Is this really a great game?’ and Miyamoto replied ‘All of your accountants and secretaries are playing this game on their lunch breaks and after hours every day. It’s a great game!’ So then Yamauchi called in Hiroshi Imanishi, who was the number two, and said ‘I want you to have our sales guy call every distribution company and tell them to order more. I’m going ‘Wow! There’s some serious action going on there.’”

Yamauchi’s typically fierce business acumen netted Famicom’s *Tetris* another 30,000 orders, bringing the total number up to 70,000, which was still some way off the minimum 100,000 orders needed to generate a hit. With so many excess cartridges in production Bulletproof would have to start slashing prices or dumping stock altogether by January, a resort that Henk simply couldn’t afford to take. “If a game goes into dumping and is sold for less than it cost then you’re basically screwed!” exclaims Henk. “Nothing has ever come back from that situation. So I called my sales guy and got him to call the distributors saying ‘This is not a game that sells quickly. Hold onto your inventory because it will come back!’ This was something unheard of, and some of the stores actually did sell out by February and eventually all the stores were screaming for the game. We ended up selling 2 million.”

If this situation wasn’t stressful enough, Henk arrived in Russia that same February, uninvited yet determined to grab the handheld rights to *Tetris* for Nintendo’s Game Boy platform. “That was my first time there and it was my reason for going. In February, with a tourist visa, I landed in Moscow and started looking for Electronorgtechnica. And I was unannounced, which never happened in the Soviet Union. You weren’t supposed to talk to anybody, let alone do any kind of business with anybody, and this was a government organisation. I walk into this place unannounced and they’re going ‘who the hell are you?’ I said, ‘I’m the guy who publishes *Tetris* in Japan. I want to talk to somebody about it.’ The guy, Mr Belikov, who



» Hooray! Quadruple line score! Waiting for that I Tetrimino almost always pays off if you’re aiming for those really high scores.



» Some games of *Tetris* last for hours. This game was not one of them.

The outside world

Henk Rogers recalls Alexey Pajitnov's first trip to Japan

"HE DIDN'T HAVE any first-hand knowledge. The first time I brought him into Japan and we went into a supermarket, his jaw dropped. His reaction was like 'Oh my God!' that this could possibly exist. If you wanted an apple in Moscow you had to stand in line with a hundred people and wait for them to call you up. You had no choice. And there's no sign in that window saying 'apple for sale'. Word gets around and when you see people queuing you know there's something for sale there. Now here he was in a supermarket surrounded by piles of fruit, and people could just pick the ones that they wanted. And these were ordinary people. They weren't rich and it wasn't a movie set. Up till then he kind of thought that all these things were like movies; they didn't actually exist, they were just props in a movie. But then he realised, oh my God, all that stuff you see in a movie actually exists. I think there were tears in his eyes."

"I rented an interpreter and a car with a chauffeur. In retrospect, the interpreter was probably KGB"

ended up negotiating with me eventually got into a lot of trouble for meeting me. They grilled him! They said, 'how did you get in touch? You must have had secret communication with him.' They bugged his room and listened in on his conversations, to find out how the hell he found me when, actually, he had nothing to do with it."

So how did Henk manage to track down the owners of *Tetris* against such resistance and suspicion? How did it all come about? "I rented an interpreter and a car with a chauffeur. In retrospect, she was probably KGB. She knew everything about everything and already knew who I was and what I was looking for. She would have the answer to my questions before I'd even asked them. So, they drove me to the Ministry Of Software on the Thursday, the day after I'd arrived, but she wouldn't go in with me. I said, 'Why not? What are you talking about?' She said, 'You don't have an invitation. You're not supposed to go in there. And I can't go in there.' 'But you're my interpreter', I said. Then I thought 'Well, I didn't come all the way to the Soviet Union, thousands of miles, to be stopped by a door.' So I just walked through that door. I said, 'I want to talk to someone about *Tetris*.'

"A little while later, somebody came down the stairs and asks 'who the hell are you'. I explain and say 'I publish the Nintendo version of *Tetris* in Japan'. And he says… 'We never sold those rights to anyone'. Well, holy crap! I had 100,000 cartridges in manufacturing, which means that I've borrowed 2 million dollars from the bank, using all of my in-laws' land as collateral, and it turns out I have to bury those cartridges. I was really screwed… There was no way I could pay them back. So I said 'Listen, I want to talk to somebody about it. And sure enough the next day I was given the third degree for three hours. Again, there were the guys from the ministry, the guys from KGB and there was [*Tetris* creator] Alexey Pajitnov. He was in the room! The ministry knew nothing about the game and the only one who knew anything about it was Alexey. I could actually have a decent conversation with him about it. I was the first guy he met from outside the Soviet Union that actually understood anything about the game at all."

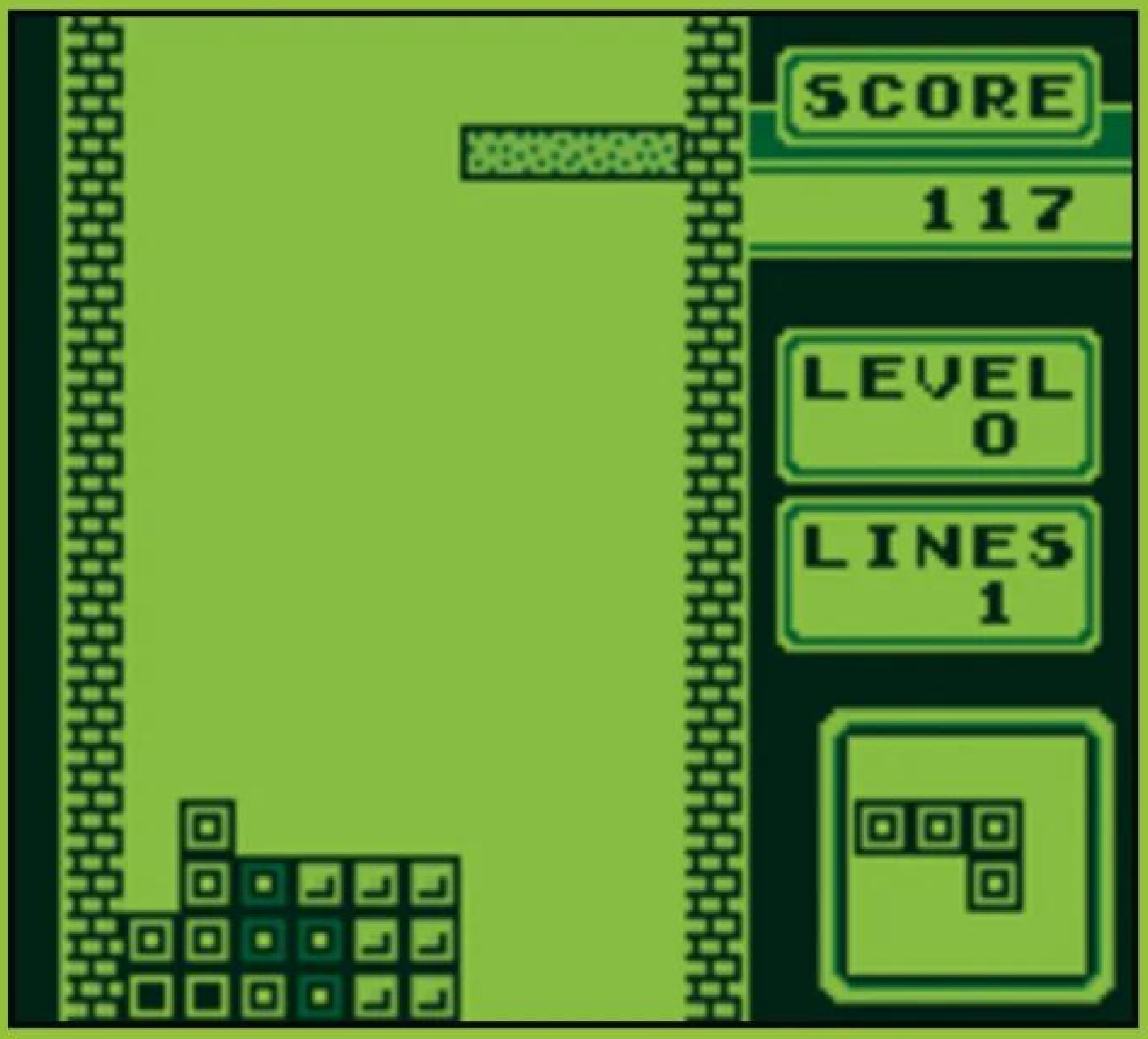
Henk's' friendship with Pajitnov, and his persistence with Electronorgtechnica, eventually paid off and he returned to Japan with the rights to produce the first officially licensed handheld edition of *Tetris*, which would be programmed by Nintendo. "I came up with the innovation of which buttons to use," says Henk. "I thought that I had to make the interface a certain way, to match the way the PC game worked. The way the PC version worked, you have a left, a right, the middle button is rotate and then the space bar is hard drop. So if you flip that and transfer it to the little Nintendo controller, you've got left, right, pull down to rotate and then the fire button will give you a hard drop. That's how it translates, and I thought that didn’t make sense, that the movement of the piece should all be on the left hand and rotation of the piece on the right hand. I asked my programmers to make it that way but when we sent it to QA everybody hated it. But of course, if you’re in the middle of playing a game and all of a sudden the gas pedal and brake are reversed then nobody can handle that. And, in fact, that’s exactly what Nintendo did, putting the movement and drop on the D-pad and left and right rotation on the two buttons. They also added a soft drop to the D-pad. And that was one of the complaints about it, that you’d move left and right and every once in a while accidentally hit the down button and cause a hard drop. But Nintendo added the soft drop so it would only drop a little faster rather than instantly. You could still control it after hitting down by accident.”

Block Rocking Beats

Henk Rogers explains the origin of that catchy Tetris theme tune

“THE THING ABOUT music is that there are rights issues [with licensed tracks] or you have to create something good enough, so I told my guys ‘Find me a Russian folk song’, because those things are free, they’re public domain. And the fact that they’ve lasted hundreds of years means that they must be good. And yet people in the west haven’t heard them as much as the people in Russia have, so let’s give it a shot. We tried it and it was okay, people didn’t object to it. And it ended up becoming a ‘have to have’ together with Tetris; people started identifying the game with that music, which is a good thing. But it turns out that they weren’t all folk songs. One of them was a soldier singing to his girl while he’s fighting, hoping that he’ll make it back. If I’d have known what the words were… I had no idea.”

Porting *Tetris* to Game Boy should have been a simple affair, but there was another complication. “The approval was meant to be done on a Friday and then the game would go to mastering on the Monday, so there really was no time,” recalls Henk. “So on Friday I get the game and I’m playing, on a Game Boy, and it feels like one of the pieces is coming up more than the others. It’s supposed to be random, a one in seven chance of each piece coming up at any given moment. So I told my QA guys, ‘Give me the statistics on how often each piece comes out.’ And, sure enough, it turns out that one of the pieces is coming out twice as often as the rest. So I called Nintendo and said, ‘This is unacceptable. The Russians are never going to allow this!’



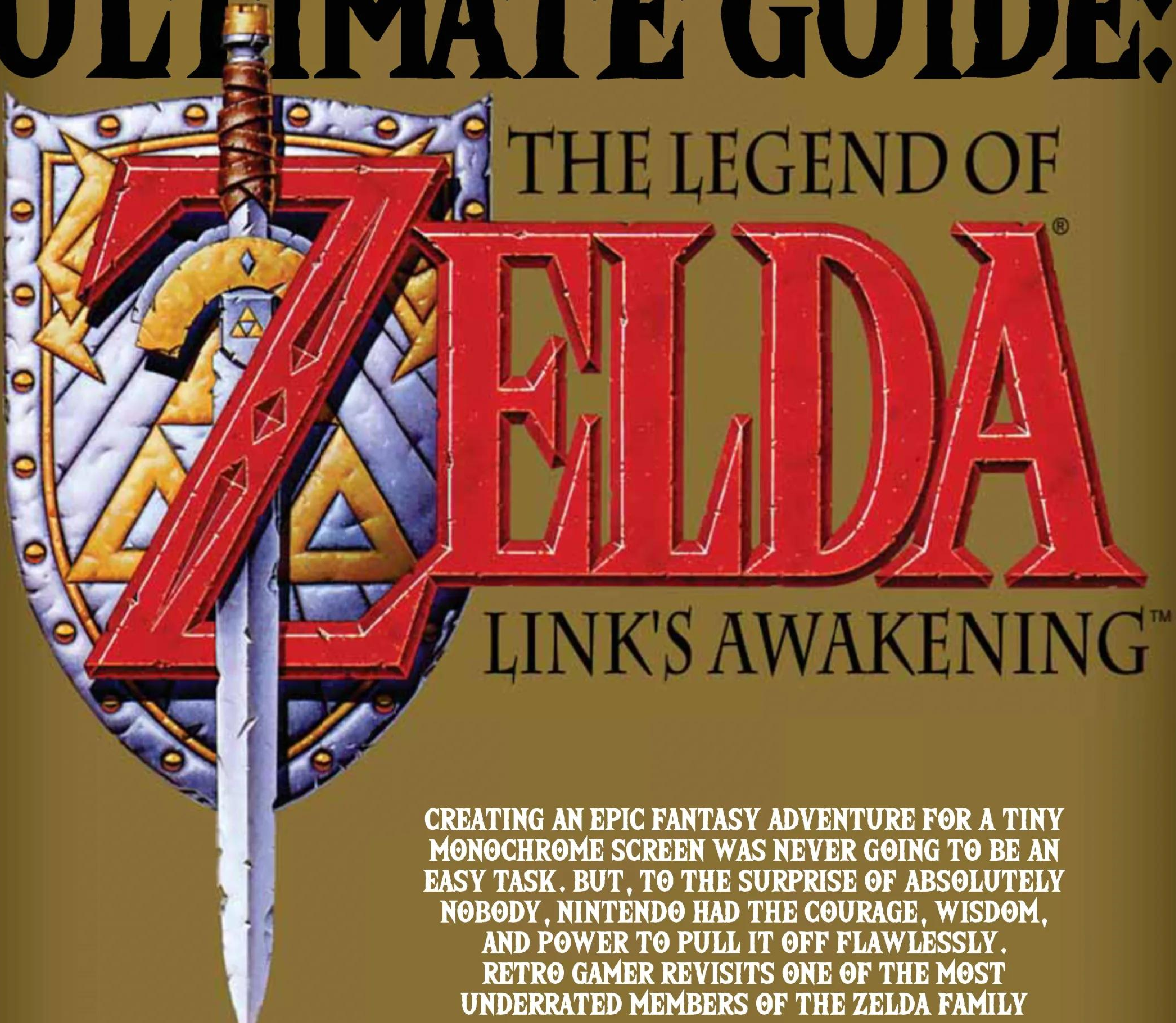
» You’re playing the music in your head right now, aren’t you?

What Henk wasn’t telling Nintendo, is that the Russians didn’t actually require final approval. “I pretended, because the rights came from me, that I had to get approval from the Russians, which I didn’t because no one there knew a damn thing, and we didn’t have the time to send them the game then wait for a reaction to come back. But they didn’t understand the game anyway, so it didn’t matter.” Instead, Henk relied on his own instinct. “There really is no other game that requires a real random number generator,” he continues. “If one too many stars come up in *Mario* nobody is ever going to know it was a mistake, but in *Tetris* you’d know. So Nintendo’s programmers came to my office in Yokohama from Kyoto, two guys come in and we sit there and think of how to fix it. For them to write a new random number generator on Saturday, ready for mastering on Monday was unthinkable. So I said, ‘It’s piece one that’s coming up twice as much as the rest, so this is what you do. When you roll a one it means it’s piece one. The next time you roll a one, you add one. The next time you roll a one, you add two, and so on. That way the error in the random number generator will be spread across all the pieces.’ So that’s what they did and then you couldn’t tell that it wasn’t random.”

And with that, Game Boy *Tetris* was completed. There’s an end to Henk’s *Tetris* story; the decision to give away this fantastic game for free, to everyone in the west who bought a new Game Boy. “I think I was in Redmond talking with Nintendo and it seemed like Game Boy was the best platform for *Tetris*. [Minoru Arakawa said ‘Why shouldn’t I pack in *Mario*?’ I said ‘Well if you want to sell Game Boy to little boys then pack in *Mario* but if you want to sell Game Boy to everybody then pack in *Tetris*.’”

Game Boy and *Tetris* went hand-in-hand, and with sales of 30 million, they put both game and hardware into the collective consciousness of a generation. Henk Rogers now runs the Tetris Company alongside Alexey Pajitnov, licensing *Tetris* and standardising its rules for future generations. 31 years after Henk first got hooked on *Tetris*, it seems he still can’t put the puzzle game down. *

ULTIMATE GUIDE:

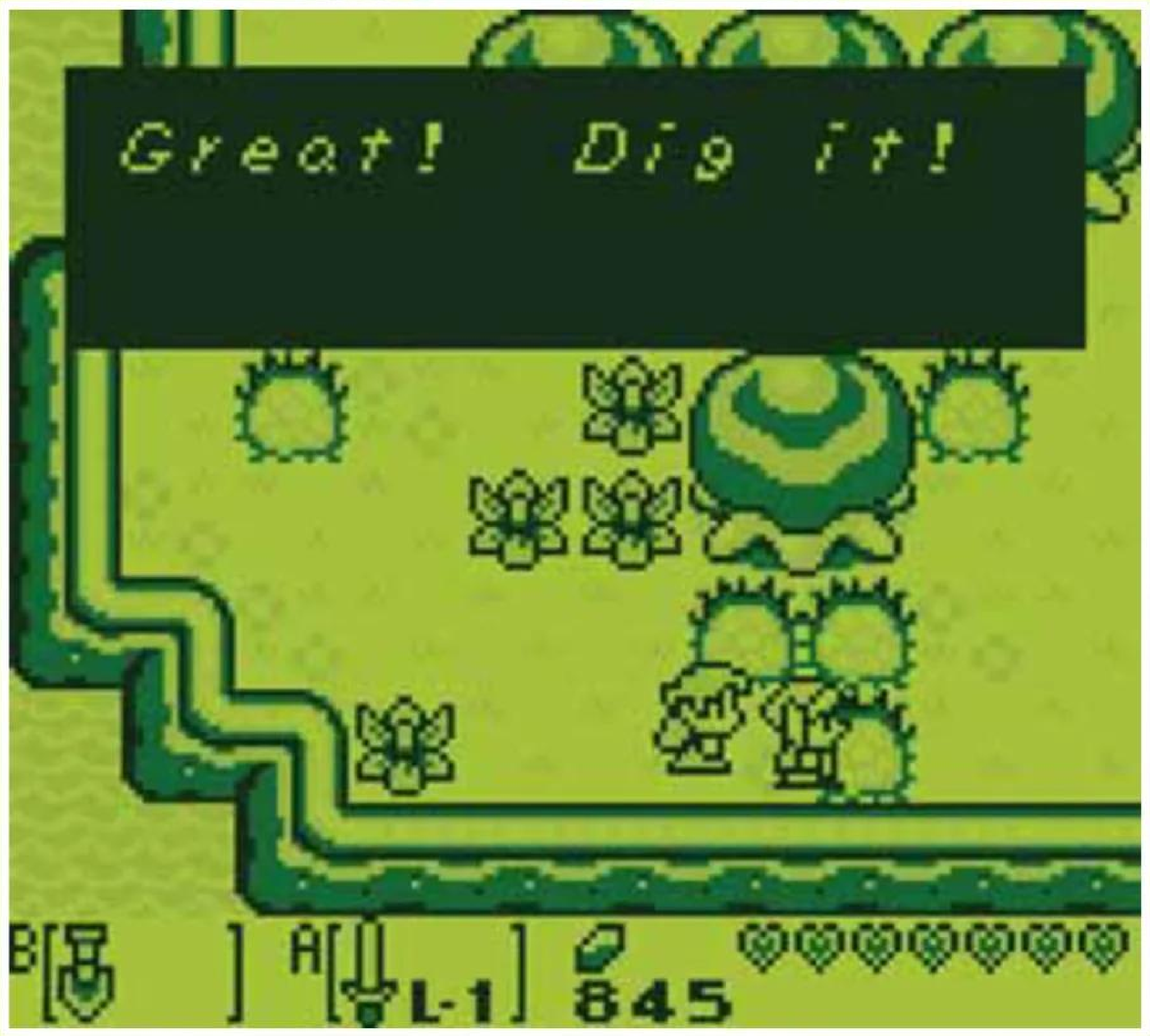


CREATING AN EPIC FANTASY ADVENTURE FOR A TINY MONOCHROME SCREEN WAS NEVER GOING TO BE AN EASY TASK. BUT, TO THE SURPRISE OF ABSOLUTELY NOBODY, NINTENDO HAD THE COURAGE, WISDOM, AND POWER TO PULL IT OFF FLAWLESSLY. RETRO GAMER REVISITS ONE OF THE MOST UNDERRATED MEMBERS OF THE ZELDA FAMILY

If there's one thing that other games could stand to learn from *Link's Awakening*, it's that the stakes don't need to be absurdly high for a story to be captivating. Having spent three games (and many more after this one) dealing with potential end-of-the-world scenarios, *Link's Awakening* is little more than an escape room by comparison – our hero finds himself marooned on a strange island following a shipwreck and is tasked with simply getting away. And so, under the guidance of a talking owl and with a little help from some of the friendly islanders, Link sets about attempting to wake the mighty Wind Fish from its slumber, which is apparently the only way he might leave Koholint Island.

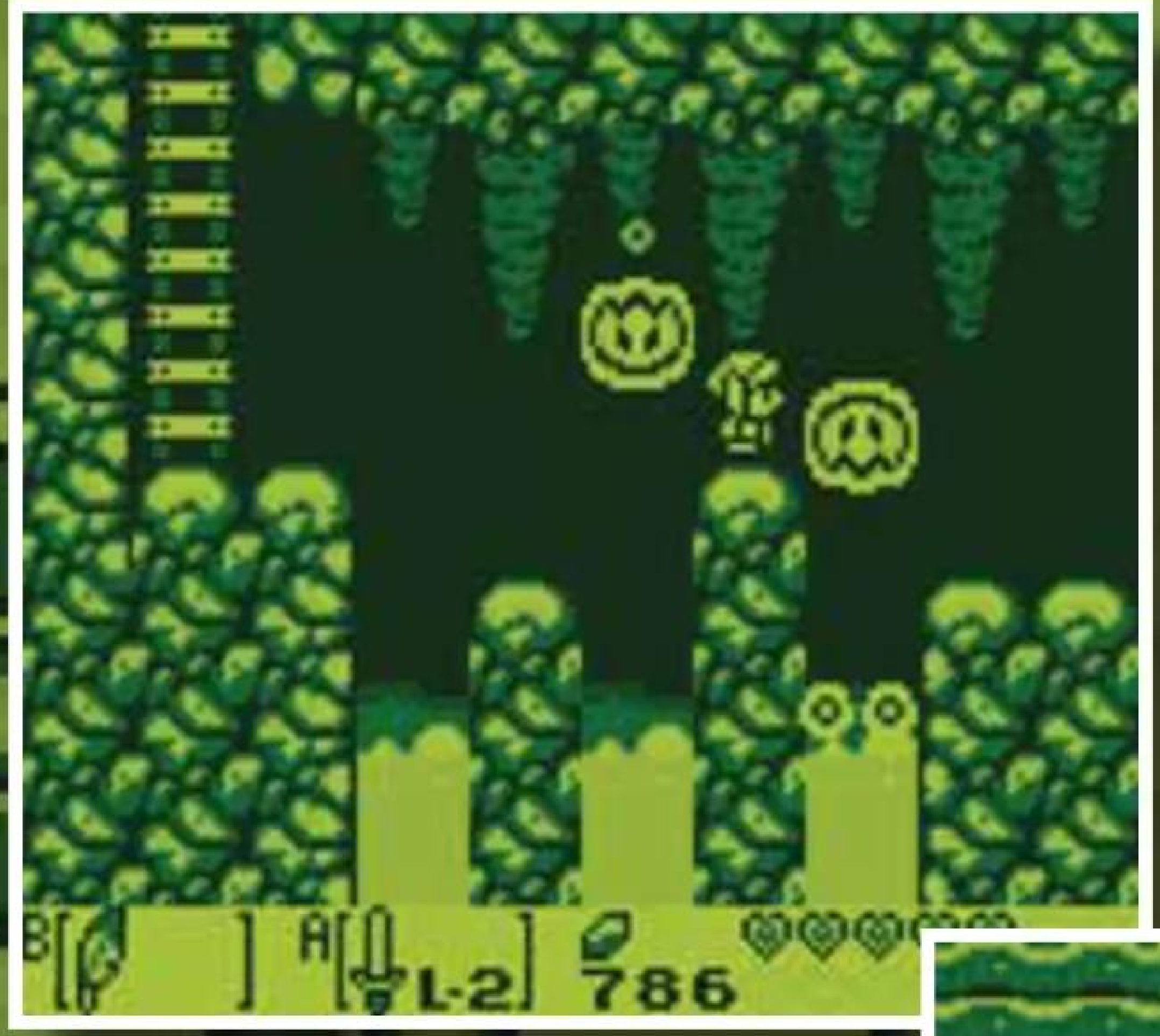
Mechanically, *Link's Awakening* feels almost like a greatest hits collection of the best elements of the trio of preceding games. Parallels with *A Link To The Past* are unsurprising given that this game originally started out as a proposed port of the SNES classic, but it clearly helped to influence and inform much of the Game Boy release's design. In terms of the NES games, *Zelda II*'s impact is most apparent from the inclusion of side-scrolling sections, while similarities to the original primarily spring from this being another case of big ideas on hardware that should by rights be too small for them. Literally, in this case – as well as a smaller, monochrome screen to work with, there would also be the button limitations of the Game Boy to consider after *A Link To The Past* had gone beyond what was possible on the two-button NES controller. A handful of talented artists would see to that first issue, but the second would not be so easily resolved.

Despite the Game Boy sharing the same limited control options as the NES, *A Link To The Past* evolved the core systems of the series to a point that made use of more buttons, so a creative solution was required. To that end, *Link's Awakening* became the first *Zelda* game where the sword is not mapped to its own button, with both the A and B buttons



Great! Dig it!

» For some unknown reason, Marin *really* likes it when you use the Shovel. Some people are just easily pleased, we suppose...



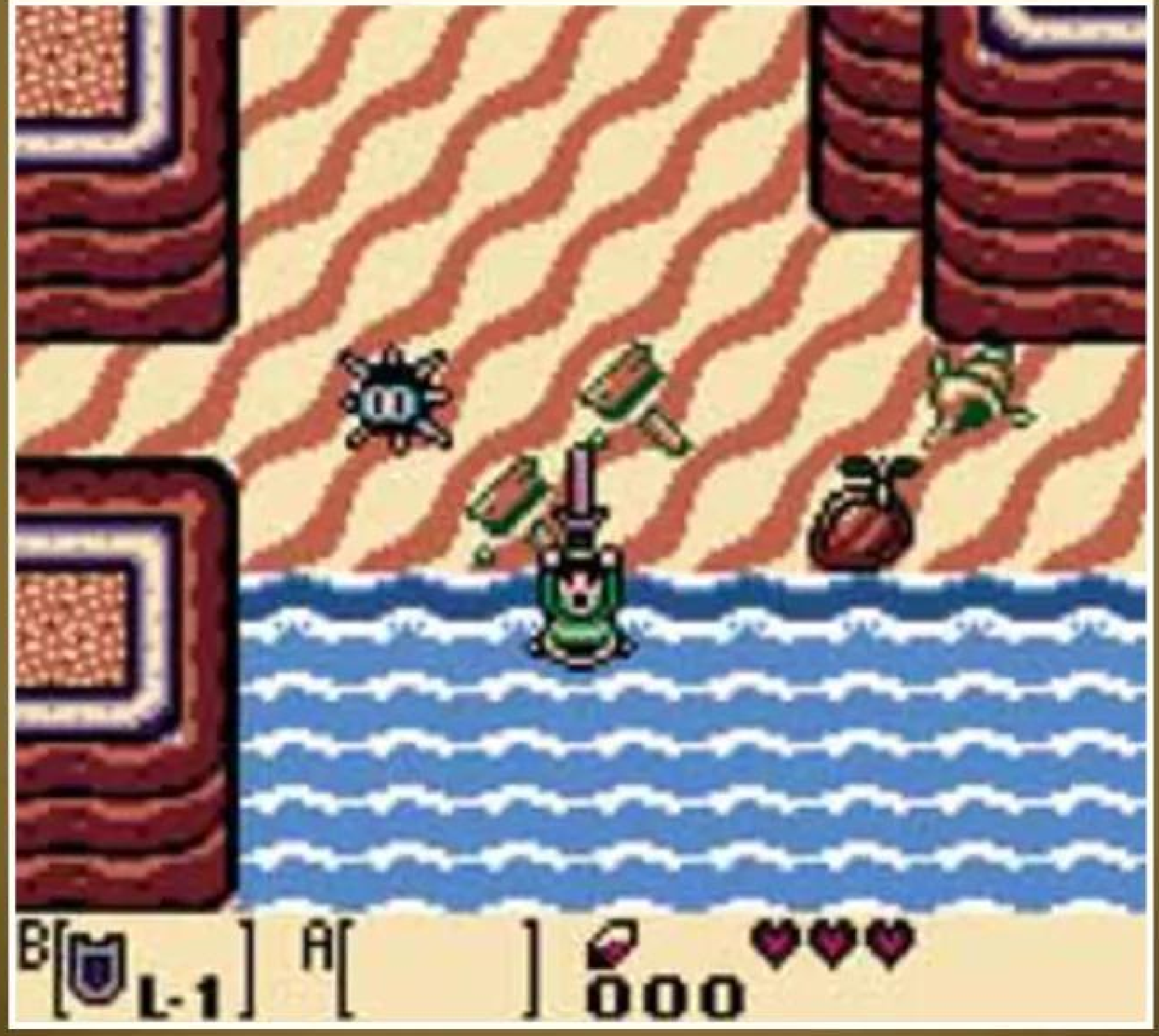
ARMOS KNIGHT

COLOUR US IMPRESSED

LINK GETS A FRESH LICK OF PAINT ON GBC

THE LEGEND OF
ZELDA
LINK'S AWAKENING
DX
©1993,1998 Nintendo

■ Arriving some five years after the original game's release, *Link's Awakening DX* for Game Boy Color breathed new life into the classic adventure with its vivid palette and suite of new features. Chief among these – aside from the colourful visual upgrade – is a brand-new dungeon for Link to explore. The aptly named Color Dungeon expands on what was possible in the monochrome original, with puzzles and mechanics that rely on the use of coloured objects and enemies. Completing this trial rewards Link with a choice of either the Red Clothes or Blue Clothes, new items that double his attack and defence respectively. In addition, the enhanced port also features support for the Game Boy Printer, with a number of photo opportunities added to the world for Link to find over the course of his adventure. The resulting snapshots can be printed out as cute little *Link's Awakening DX* stickers.

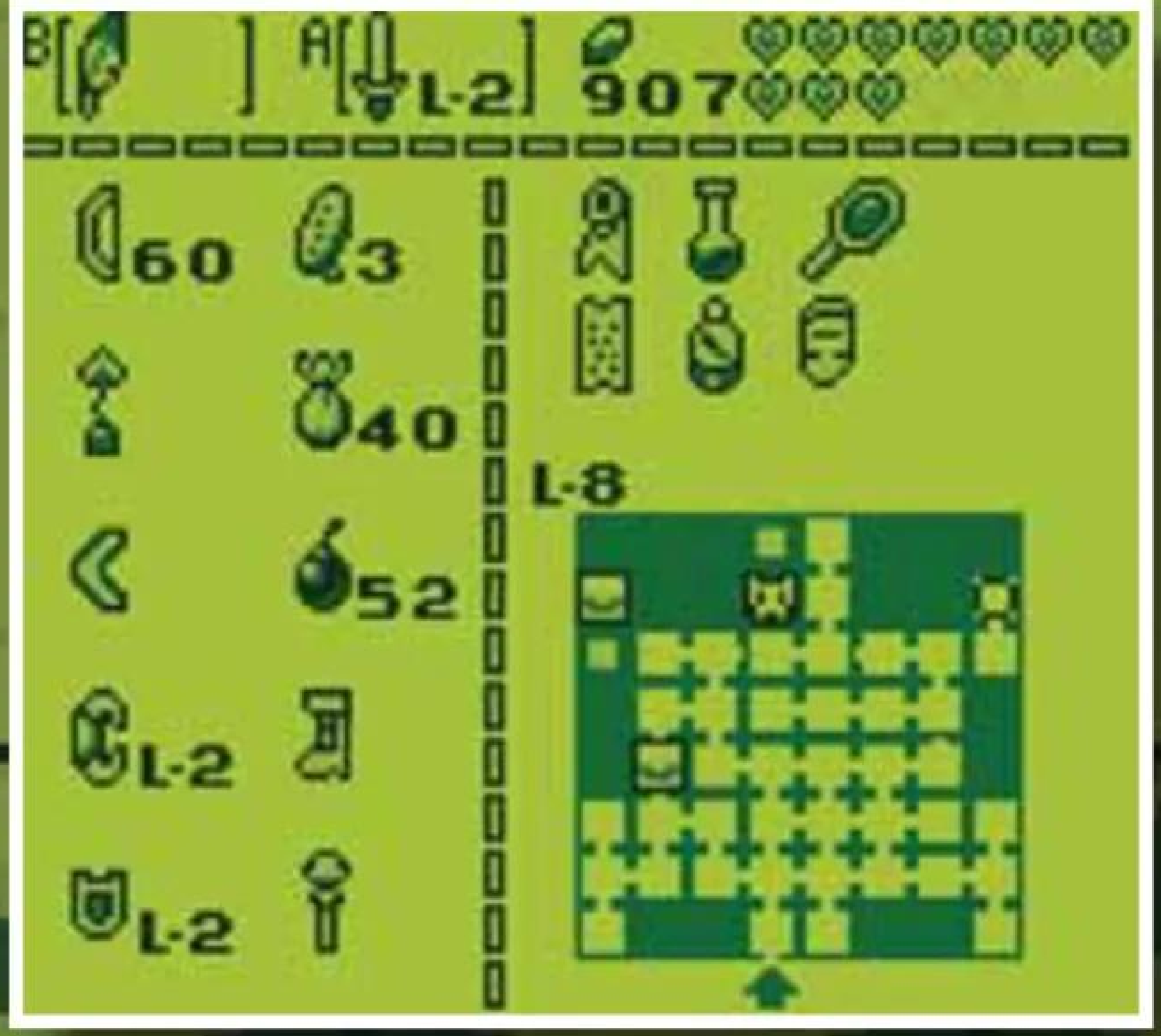


PIRANHA

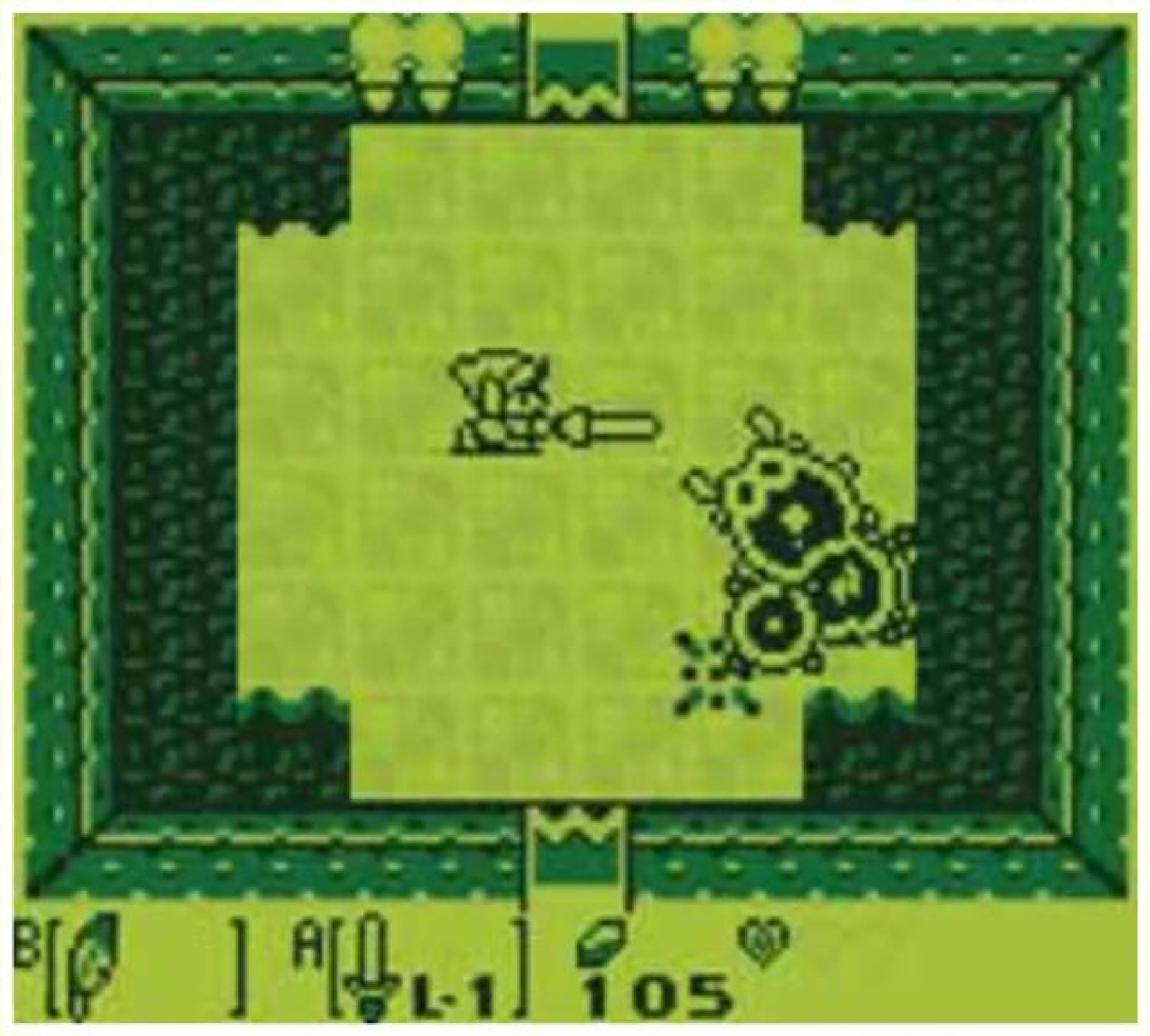
OWL

able to be assigned to any item Link finds. While this can make for some fiddly item switching (particularly in later, more complex dungeons), the flexibility of the system also allows for the use of item combos the likes of which the series hadn't seen before… or since, really. Long gaps can be cleared by combining the Pegasus Boots with the Roc's Feather, for instance, or equipping Bombs and the Bow and pressing both buttons simultaneously allows Link to loose an explosive arrow. While the former is the only item combo required to beat the game, having those other options in there gives players a chance to be surprised by their own experimental solutions – a rarity in a series so grounded in linear formula, and really something you only otherwise see in the latest entry in the *Zelda* series, *Breath Of The Wild.*

The differences between *Link's Awakening* and most of its stablemates don't stop there, either. Trading sequences are a staple sidequest in the franchise, but this is the only *Zelda* game where the entire endeavour is mandatory. As such, it's a little more streamlined and obvious than its peers and feels more like helping people out along your journey, rather than ditching your main objective and going out of your way to run errands for them. It's strange that would be the case in the game with the least pressing objective in the entire series, but it's a great way of allowing players to meet the weird and wonderful residents of Koholint without it feeling like busywork. But perhaps the most noticeable difference of all is the game's tone, which is much more playful, whimsical and lighthearted than any other game in the series, thanks in no small part to the lack of a Ganon-like big bad looming large and ready to bring an end to the world. There's just this wonderful dreamlike quality to Koholint, apparent in everything from its curious cast of characters and creatures to it having the feel of a slightly misremembered memory of a *Zelda* adventure, with elements of other Nintendo games seeping in (domesticated Chain Chomps are found in Mabe Village, Mario enemies such as Goombas and Piranha Plants inhabit dungeons, as does an evil version of Kirby later on, while the trading sequence includes cameos from



You've got a Piece of Heart!

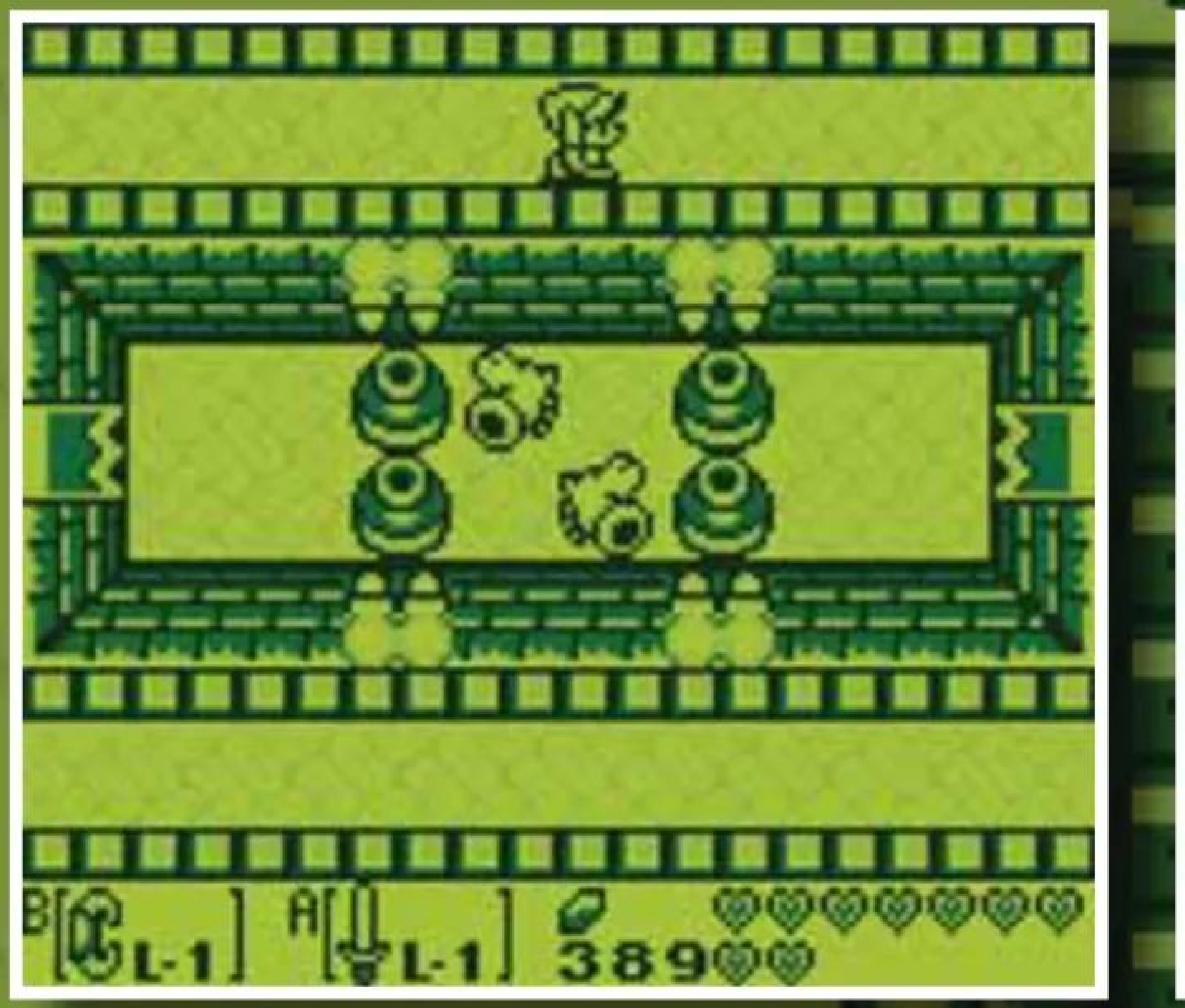


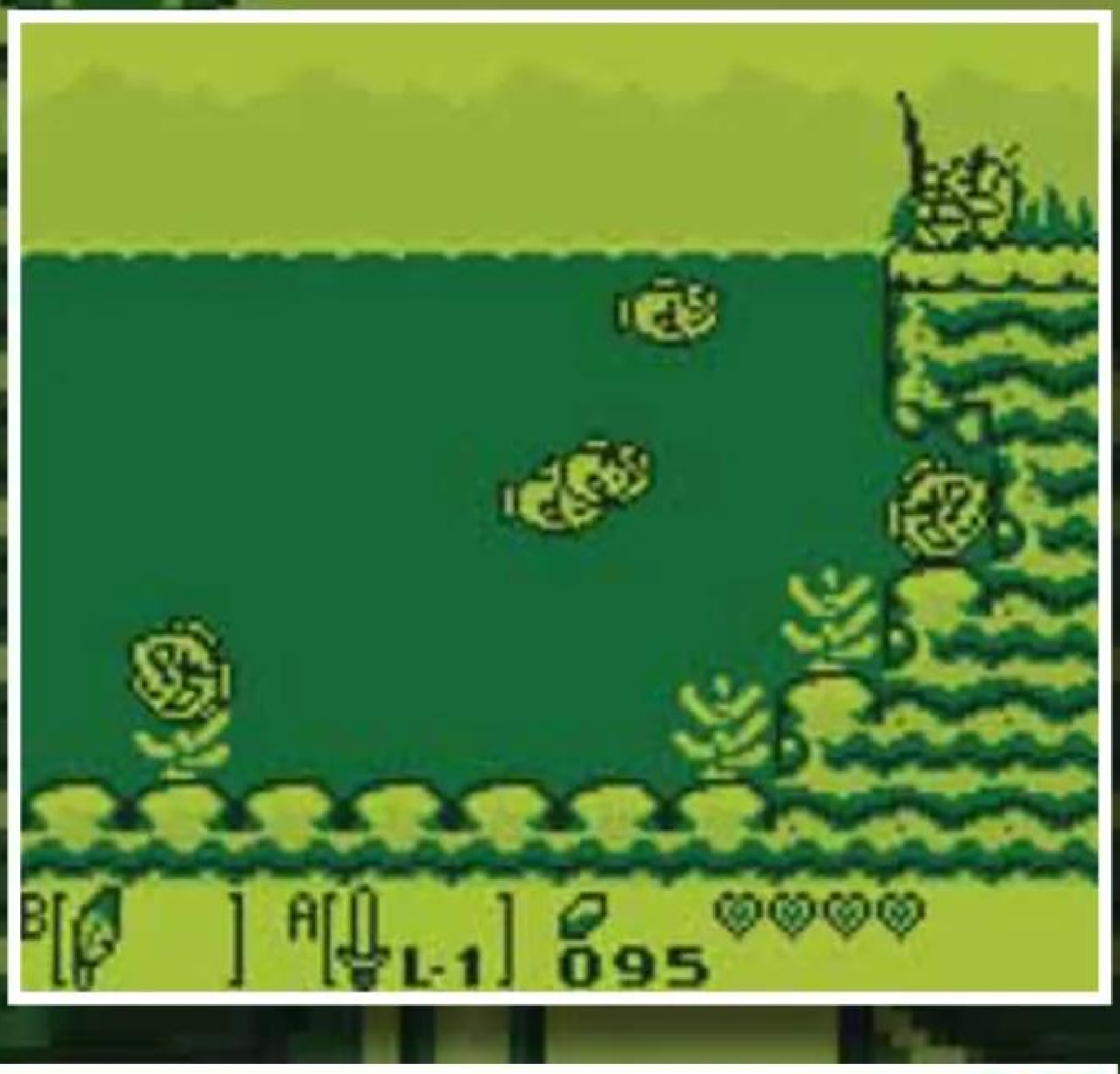
» Just like in *A Link To The Past*, the Moldorm boss loves to punt you into pits and make you start the fight over. Mind the gaps as you work its tail.

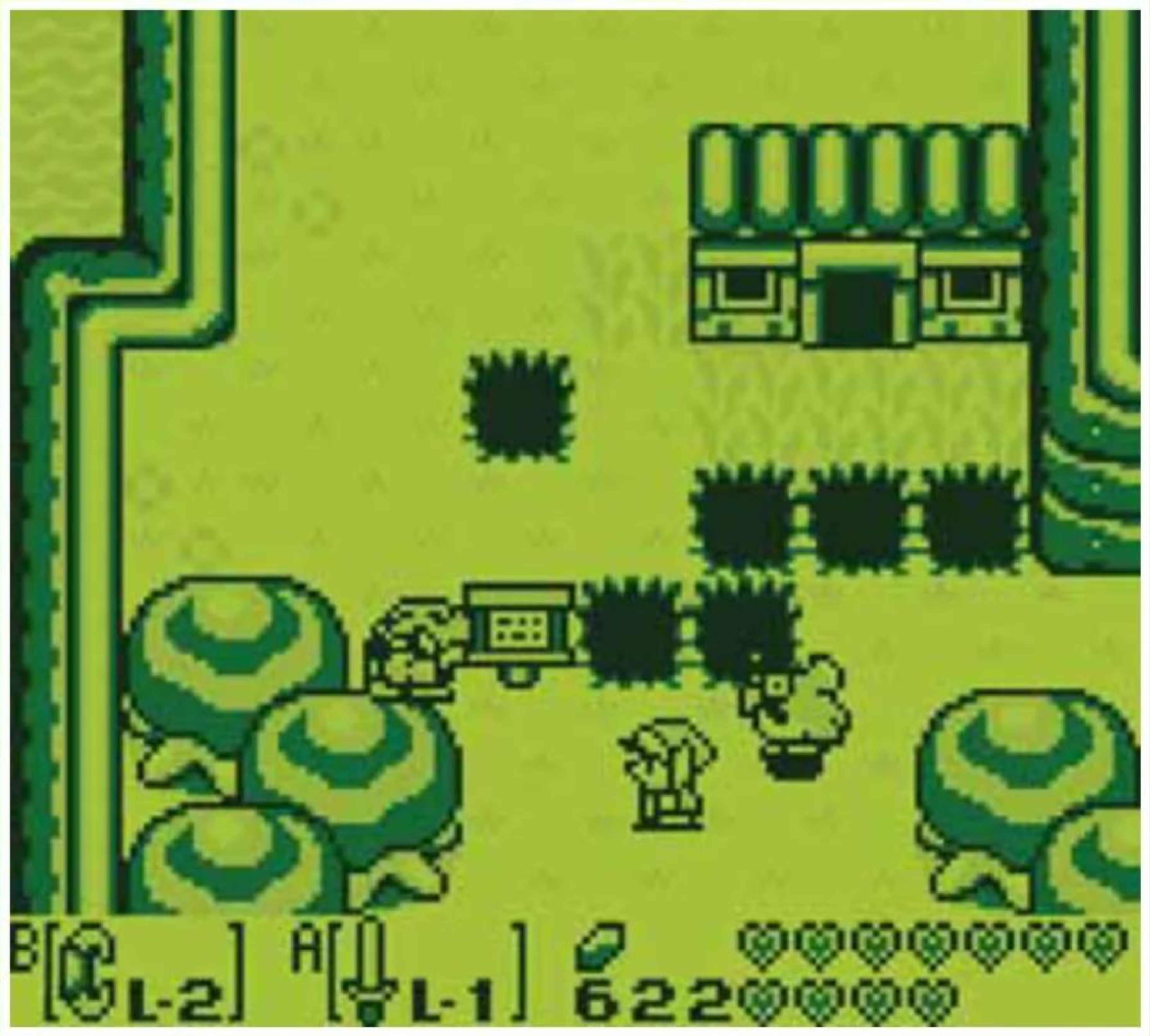
GENIE

GREAT FAIRY

GHINI
LINK
GIANT GHINI



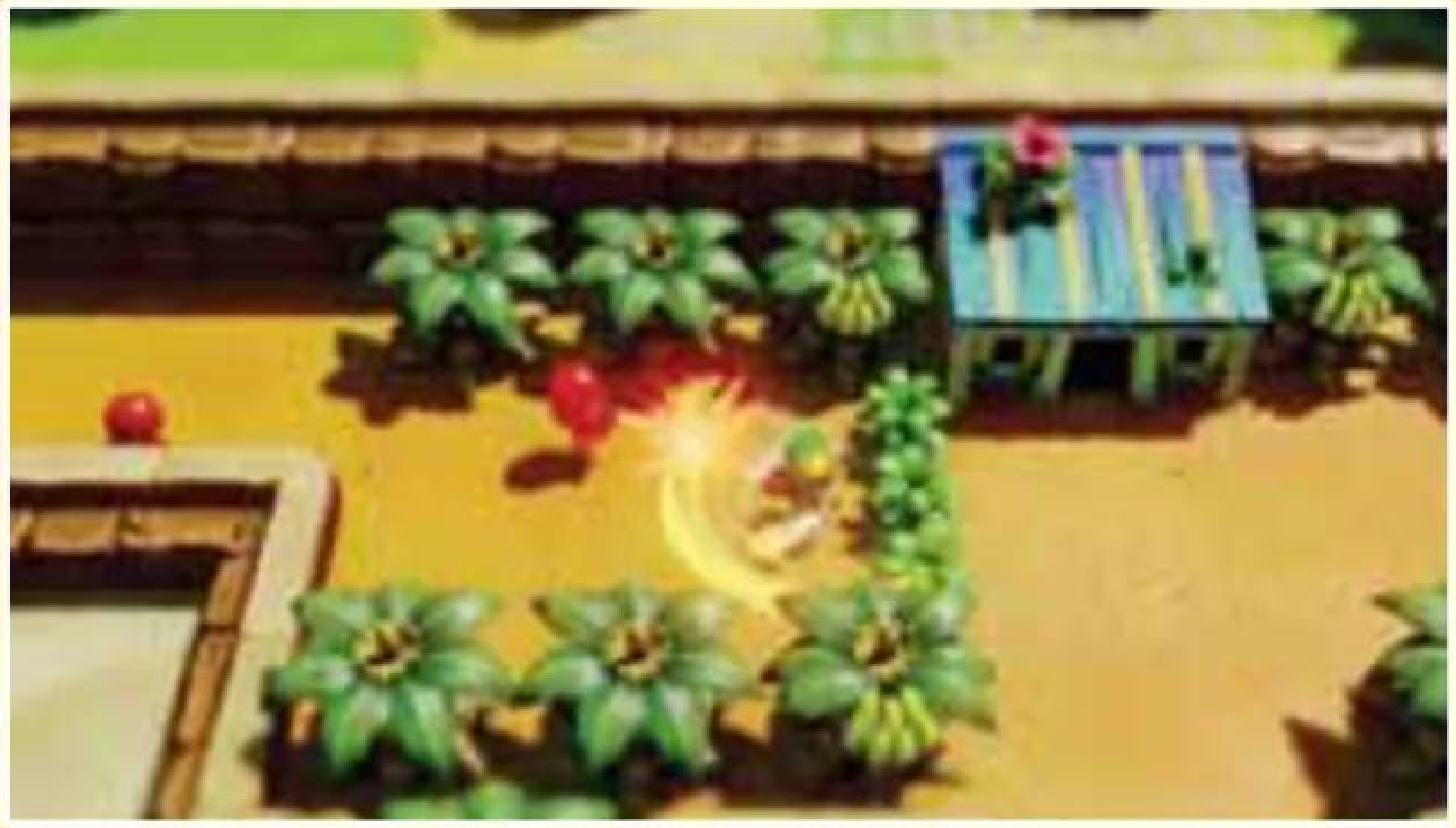


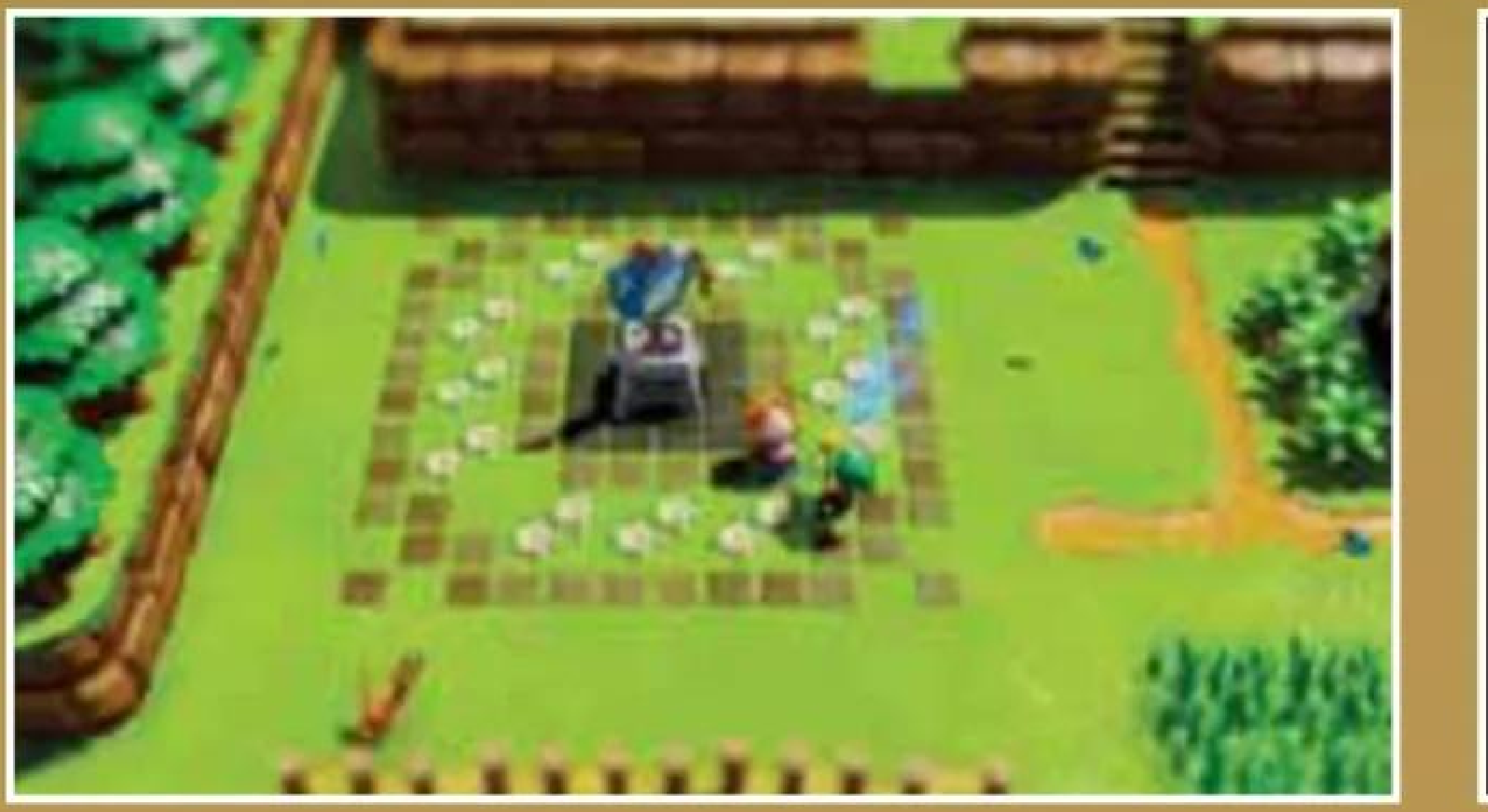


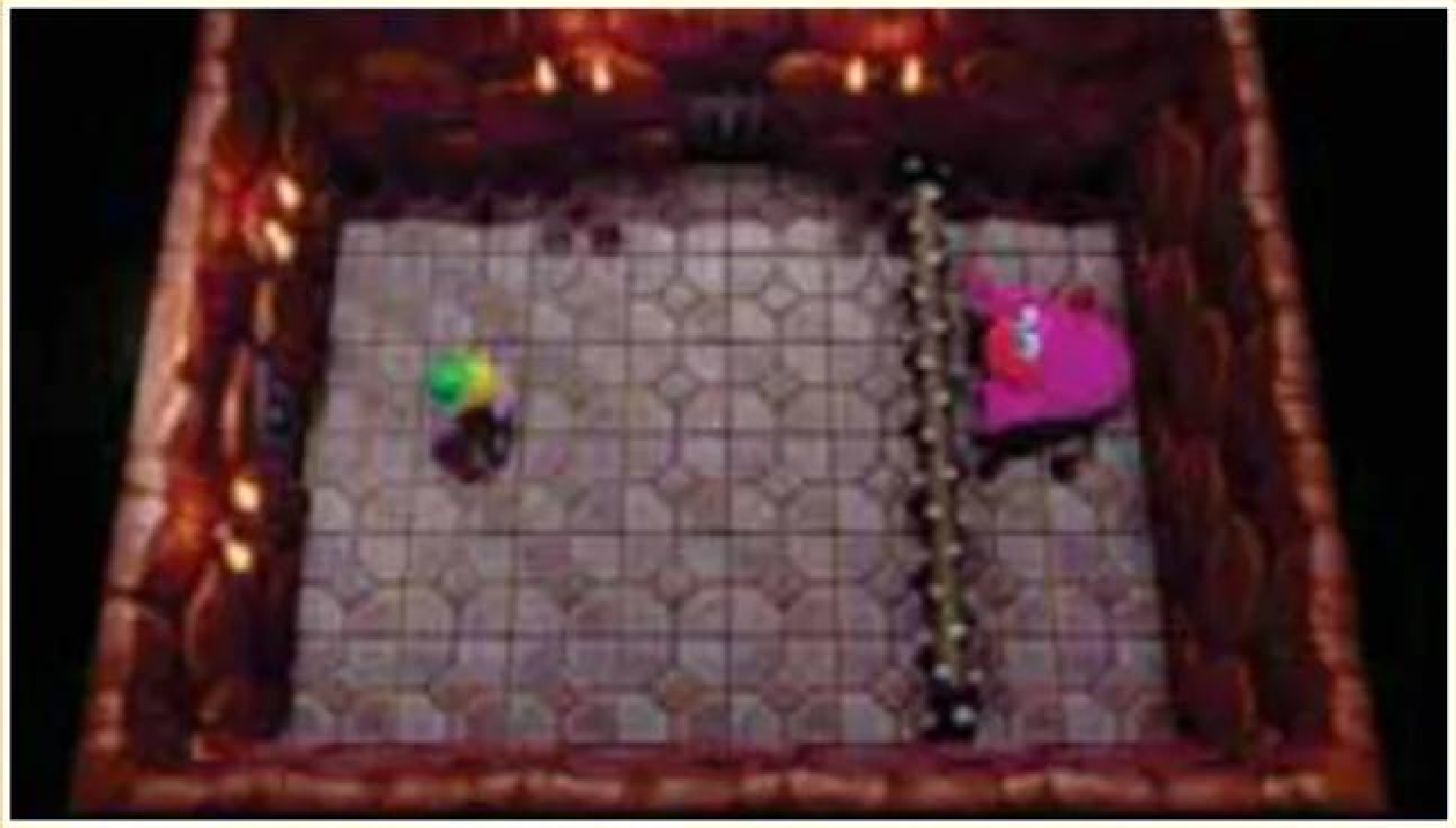
The overworld opens up quickly, especially with the first special item earned in a dungeon being the Roc's Feather, which allows Link to leap over gaps.

REAWAKENING LINK

A LEGEND REBORN ON SWITCH



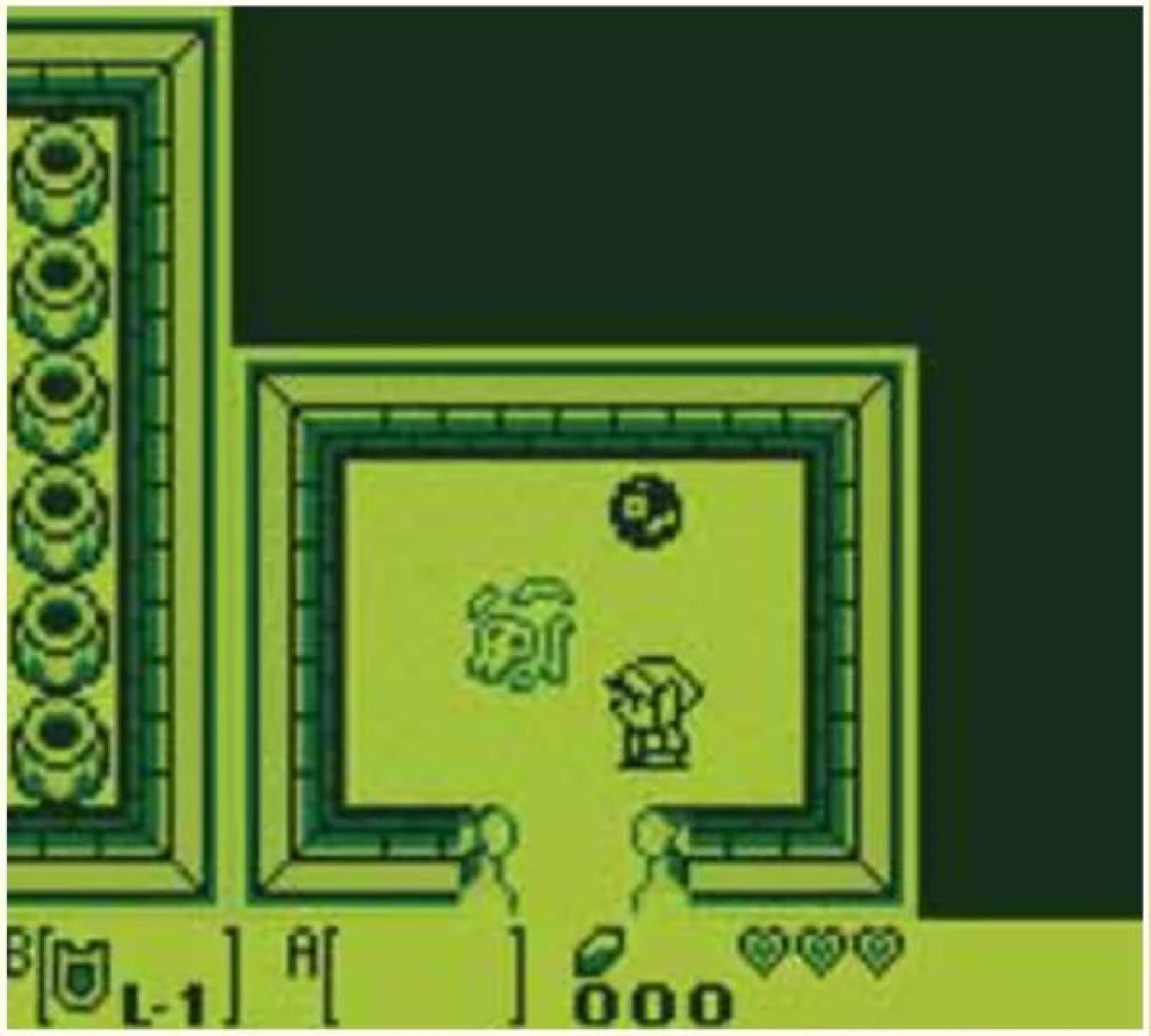




■ We've long maintained that *Link's Awakening* deserves to be enjoyed and adored by a much wider audience, and Nintendo finally seems to agree – the game will be out as you read this, although you may not recognise it at first. The quaint new visual style looks like a diorama come to life, and while it might be a little twee for some people's tastes, there's no denying that it perfectly captures the feel of the original's simple style. A slightly angled top-down viewpoint allows the game's beautiful environments to pop like never before, and it's going to be a joy to see how the many and varied locations across Koholint Island look in this charming new aesthetic. As with *Link's Awakening DX* before it, Nintendo isn't stopping with just the visuals, either. While it seems like most of the core game will be lovingly recreated, there's also another brand-new dungeon to delve into. The Chamber Dungeon is an interesting proposition, as it allows players to piece together their own custom dungeons from a host of premade rooms unlocked as the game progresses. You can even earn rewards by clearing your own custom creations, so be sure to head to where the Camera Shop was in *DX* to check it out.

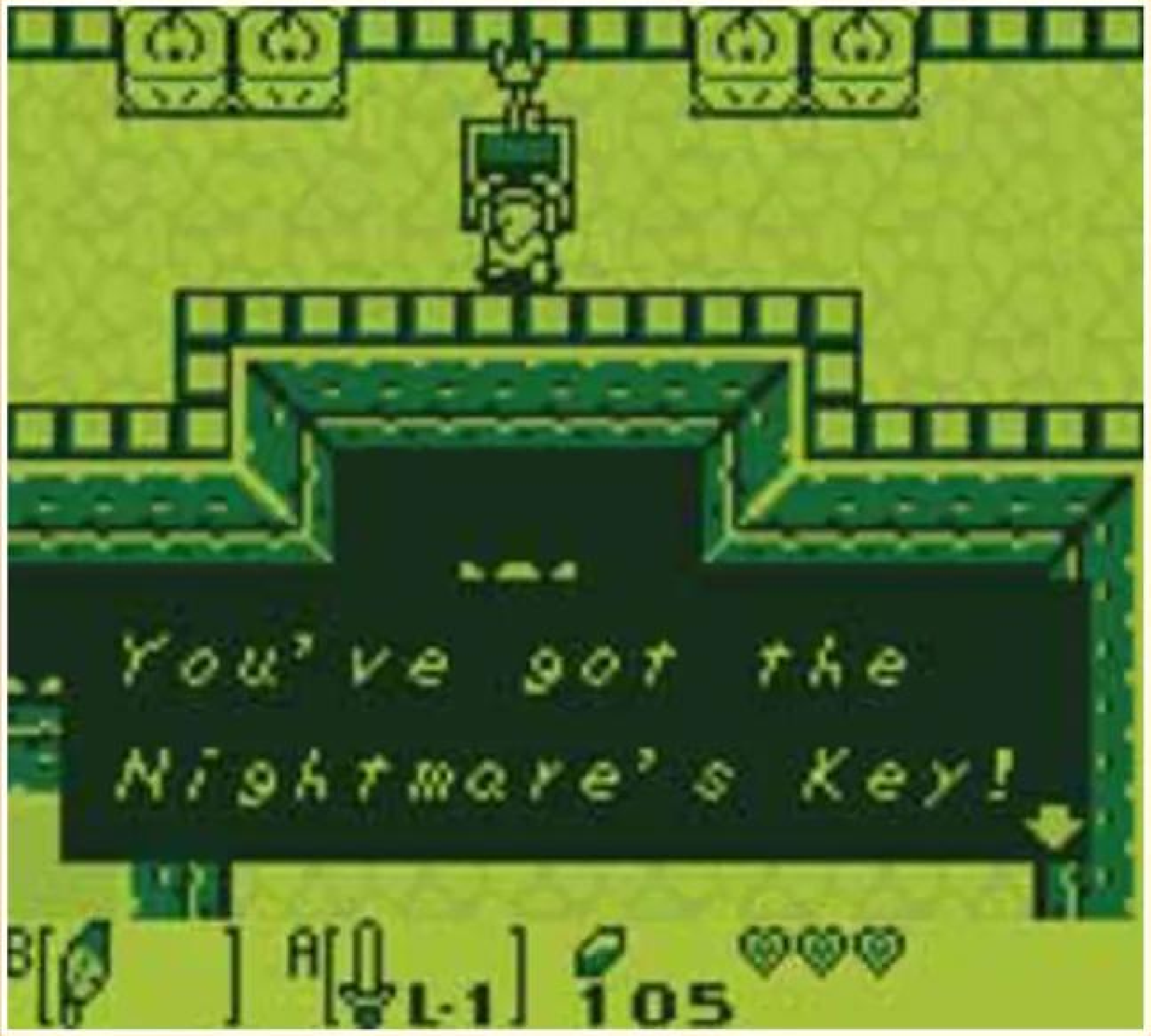
A LINK TO THE FAST

A FEW OF THE TRICKS SPEEDRUNNERS USE TO WAKE THE WIND FISH IN RECORD TIME



SAVE/QUIT

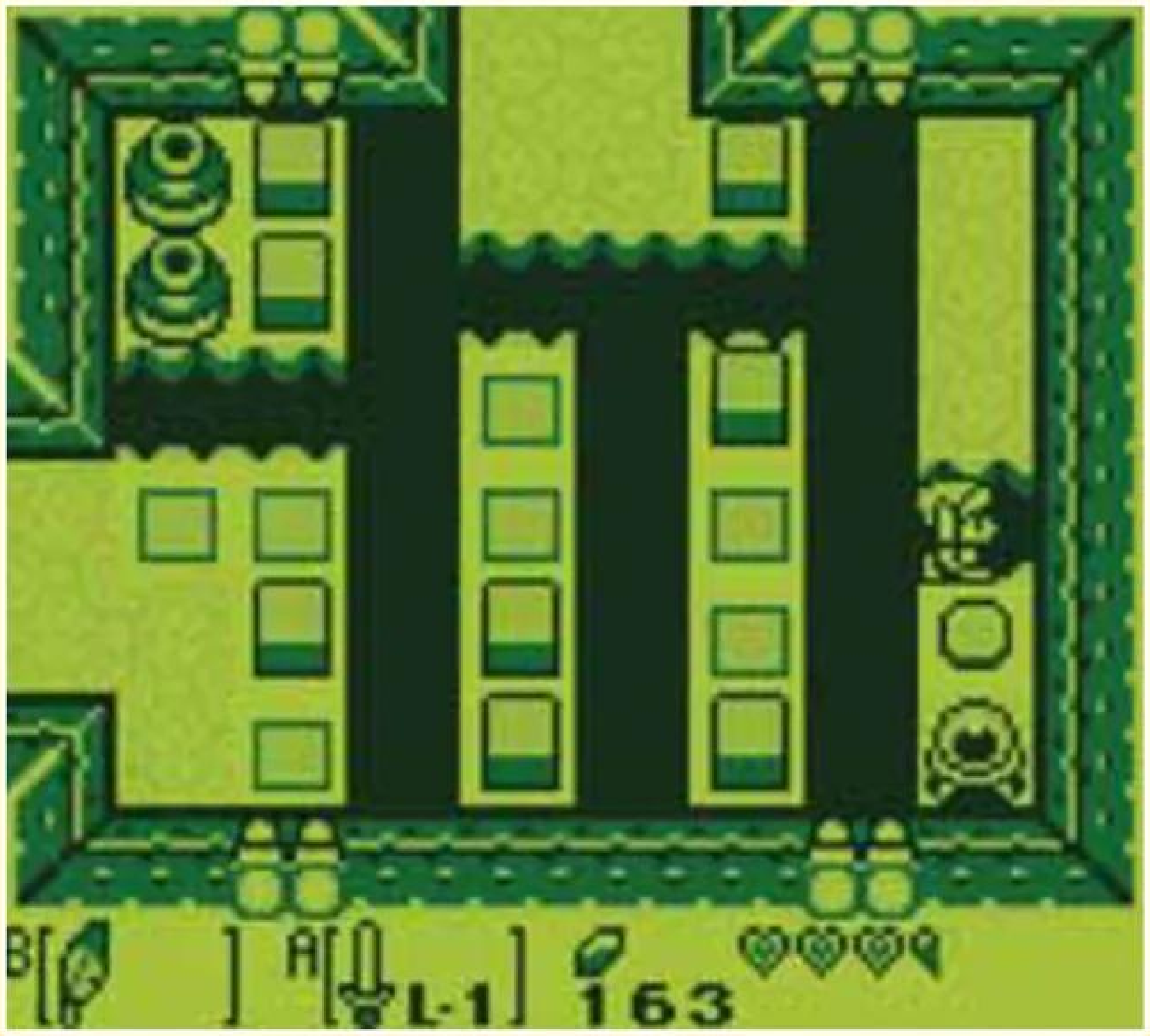
■ A pretty common technique in games is to both save and load quickly, since it's often faster to return to the previous position than to have things play out normally. Here, entering and leaving buildings and caves is the usual way to set where you restart after quitting, although you can also use the trick in dungeons to instantly return to the entrance room as well.



You've got the Nightmare's Key!

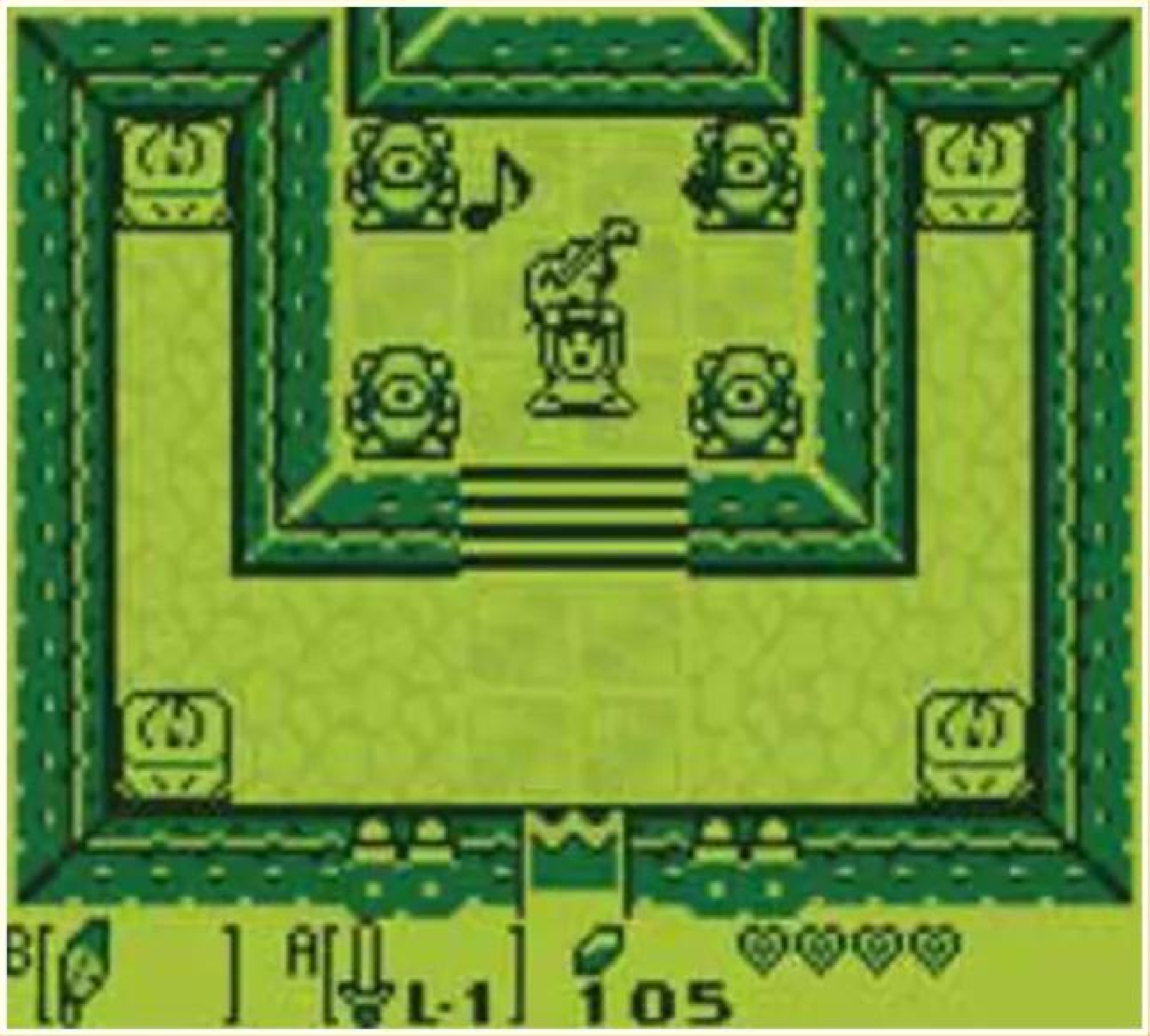
TEXT SKIP

■ Going into the save menu by pressing Start+Select+A+B as soon as any text box would pop up then continuing can let you skip most dialogue in the game, from simple item descriptions to longer conversations. It only typically saves a few seconds per instance, but that all adds up over the course of the run.



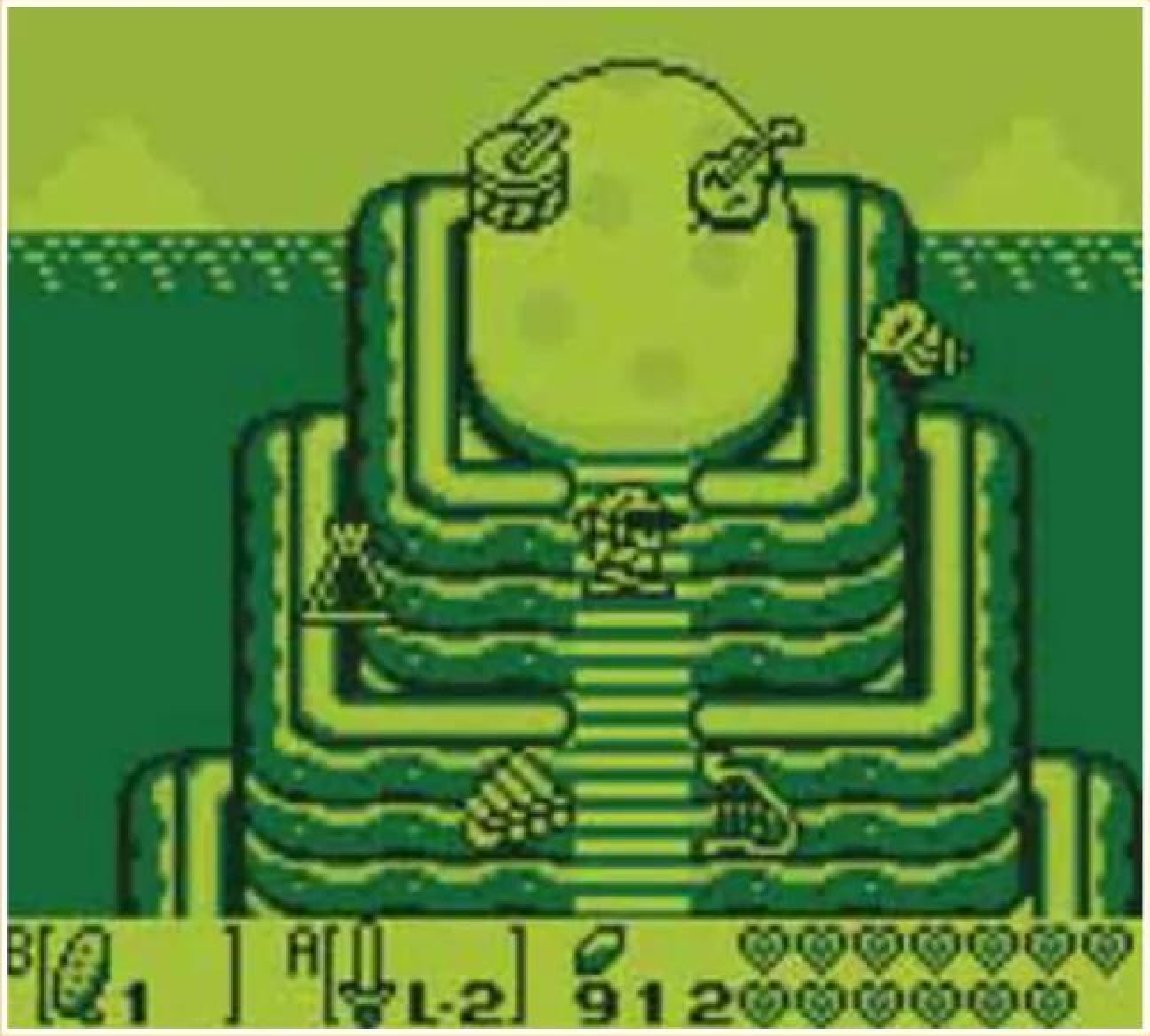
SUPER JUMP

■ How convenient that the first key item you get allows for some of the most significant skips! By clipping into the corner of a wall and moving along it then swinging your sword while jumping, you can set up jumps that can clear otherwise impossible obstacles and even ignore elevation changes. There are a bunch of spots where this can save significant time.



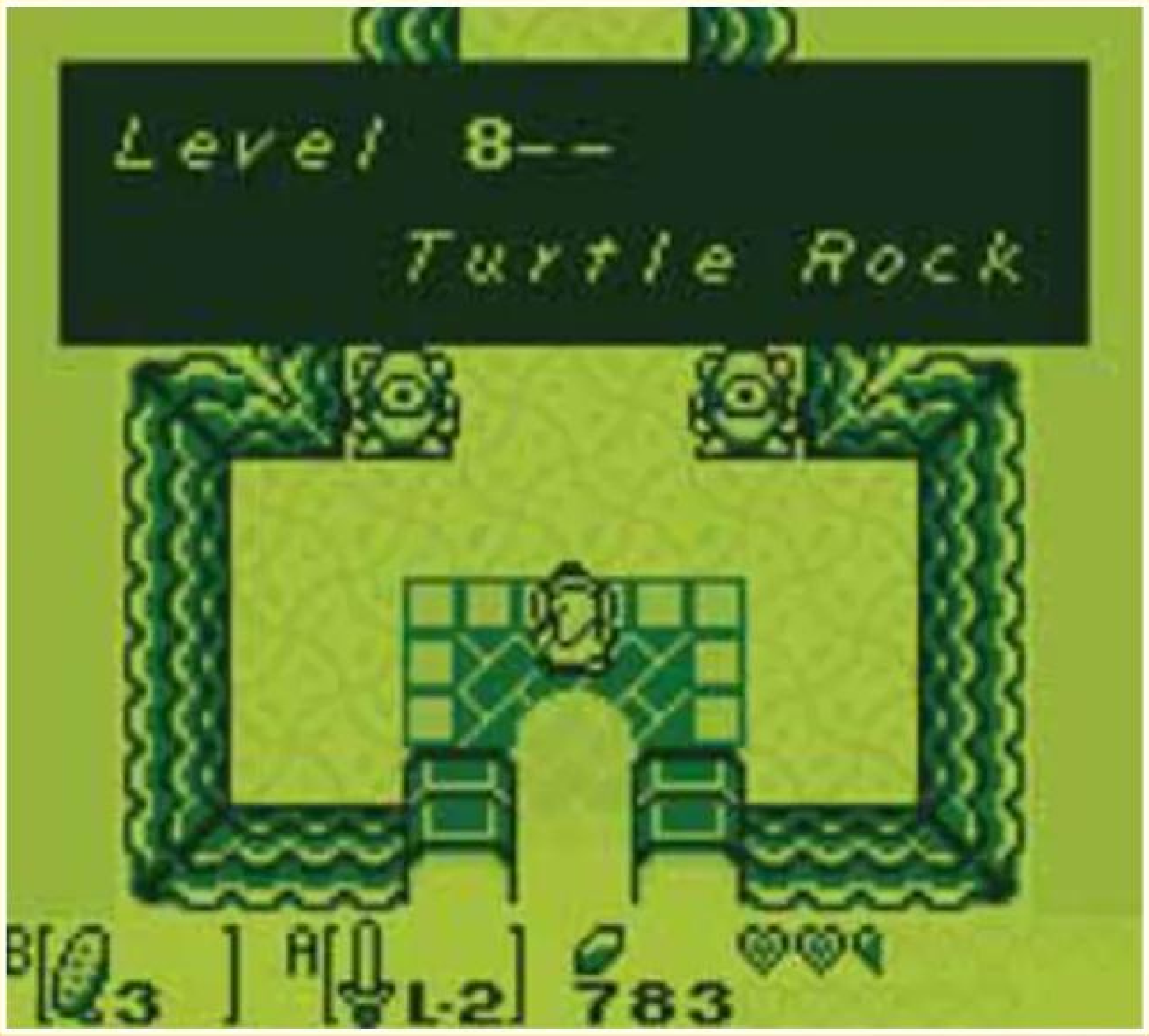
INSTRUMENT SKIP

■ Just as most text can be skipped, so too can the majority of the short musical interludes that occur when you pick up the instrument at the end of a dungeon. This involves setting up Link's position so he's only a pixel away from the instrument and using the map screen to buffer into the save menu as the item is picked up, although this is not what you might call 'consistent'.



BOMB TRIGGER

■ Oddly, using a bomb exactly as a screen transition occurs will result in triggering whatever special scene happens on the new screen. This can be used to skip the walrus blocking the exit to Animal Village, open the Turtle Rock dungeon, break the pillars in Eagle's Tower, and even skip the Wind Fish Egg sequence, although it can be quite fiddly and requires two bombs per skip.



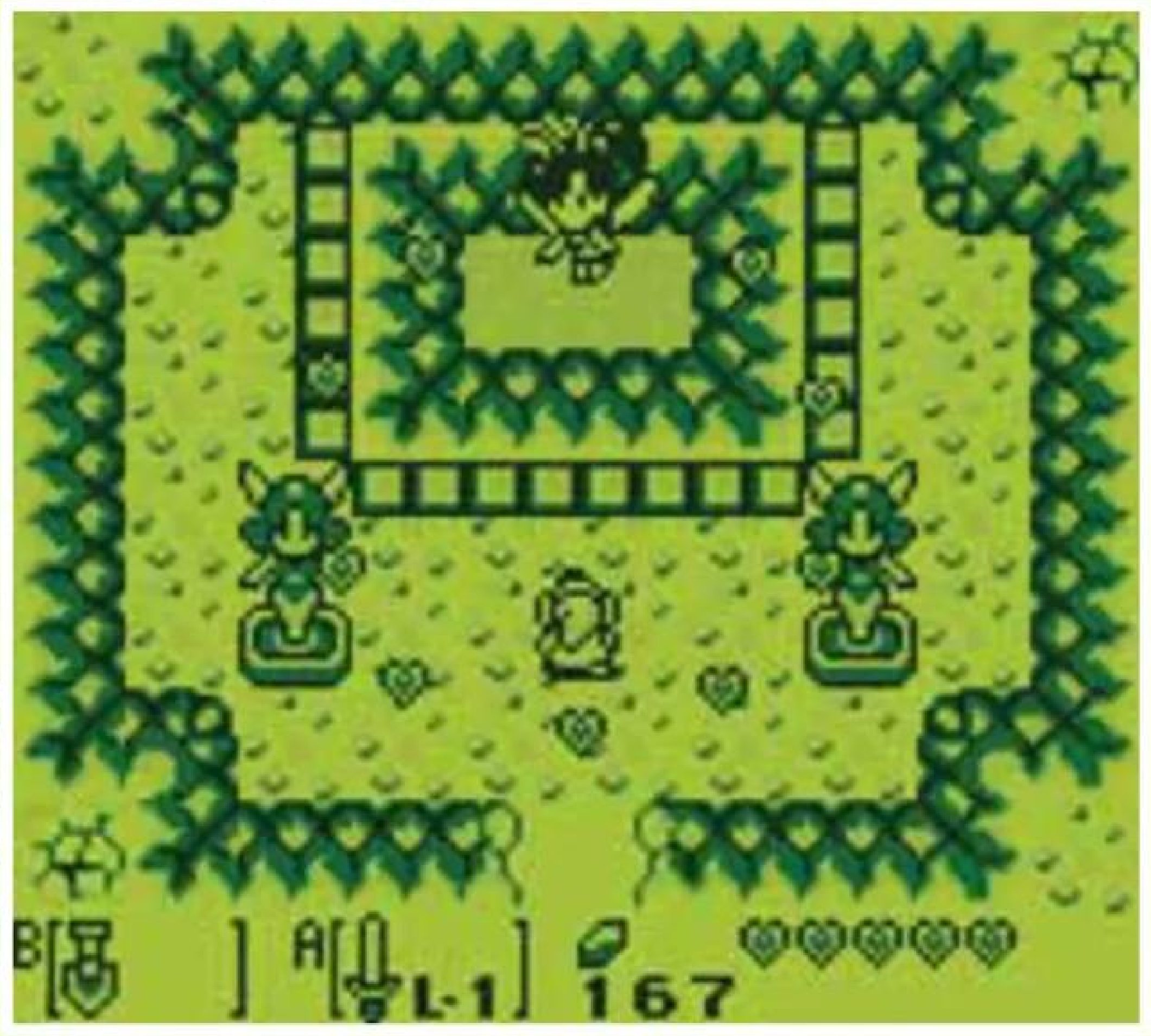
Level 8--
Turtle Rock

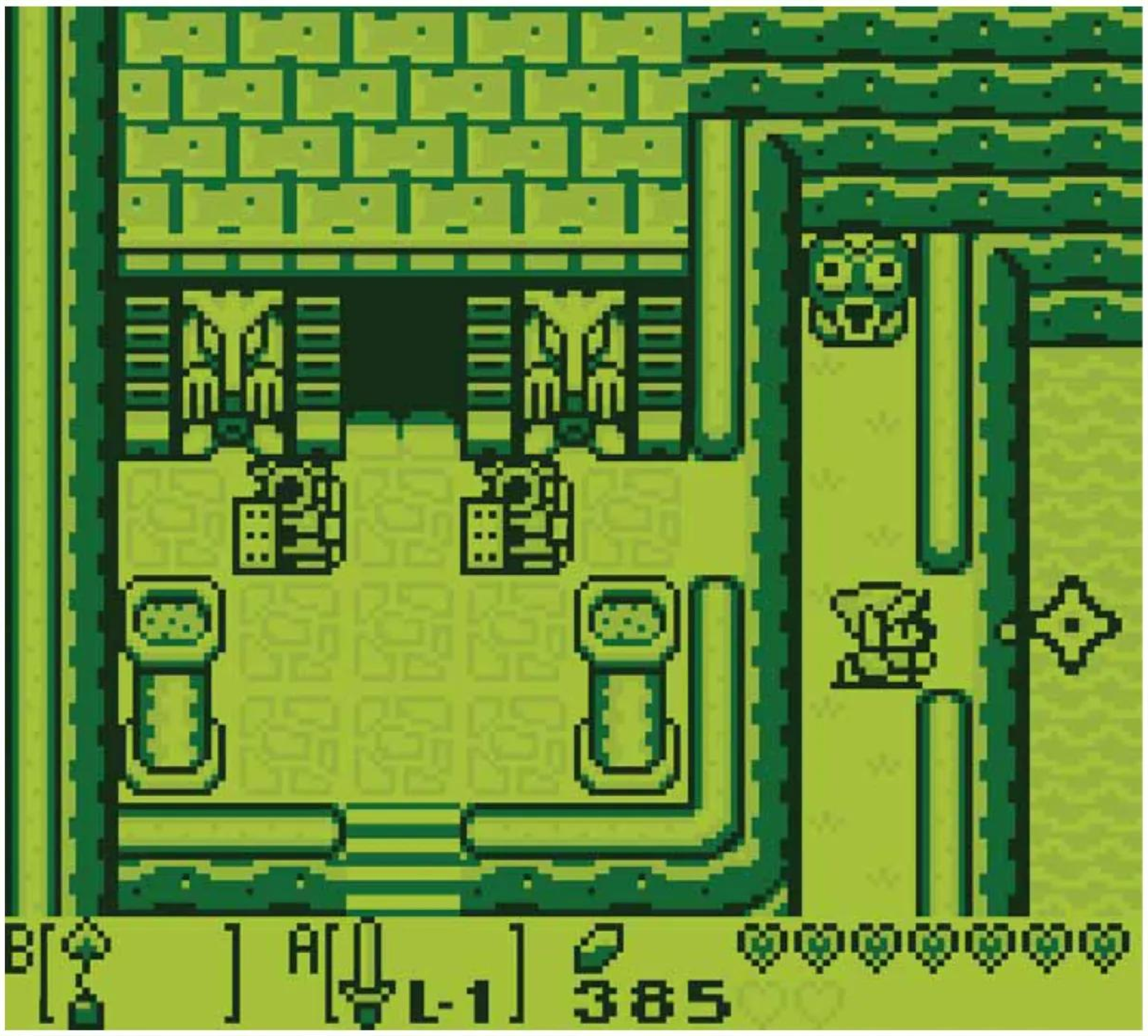
MAGIC ROD DESPAWN

■ Routes that do dungeons out of order can abuse this neat technique, which takes advantage of the game's sprite limit. Going into the menu quickly after multiple Magic Rod projectiles are active can cause intense slowdown, and changing the screen straight after this will despawn any sprites on that screen, including bosses.

MOBLIN

» True to form, any Great Fairies you find will fully restore your health. Smaller ones can't be captured, although Crazy Tracy's Secret Medicine has the same revival effect.



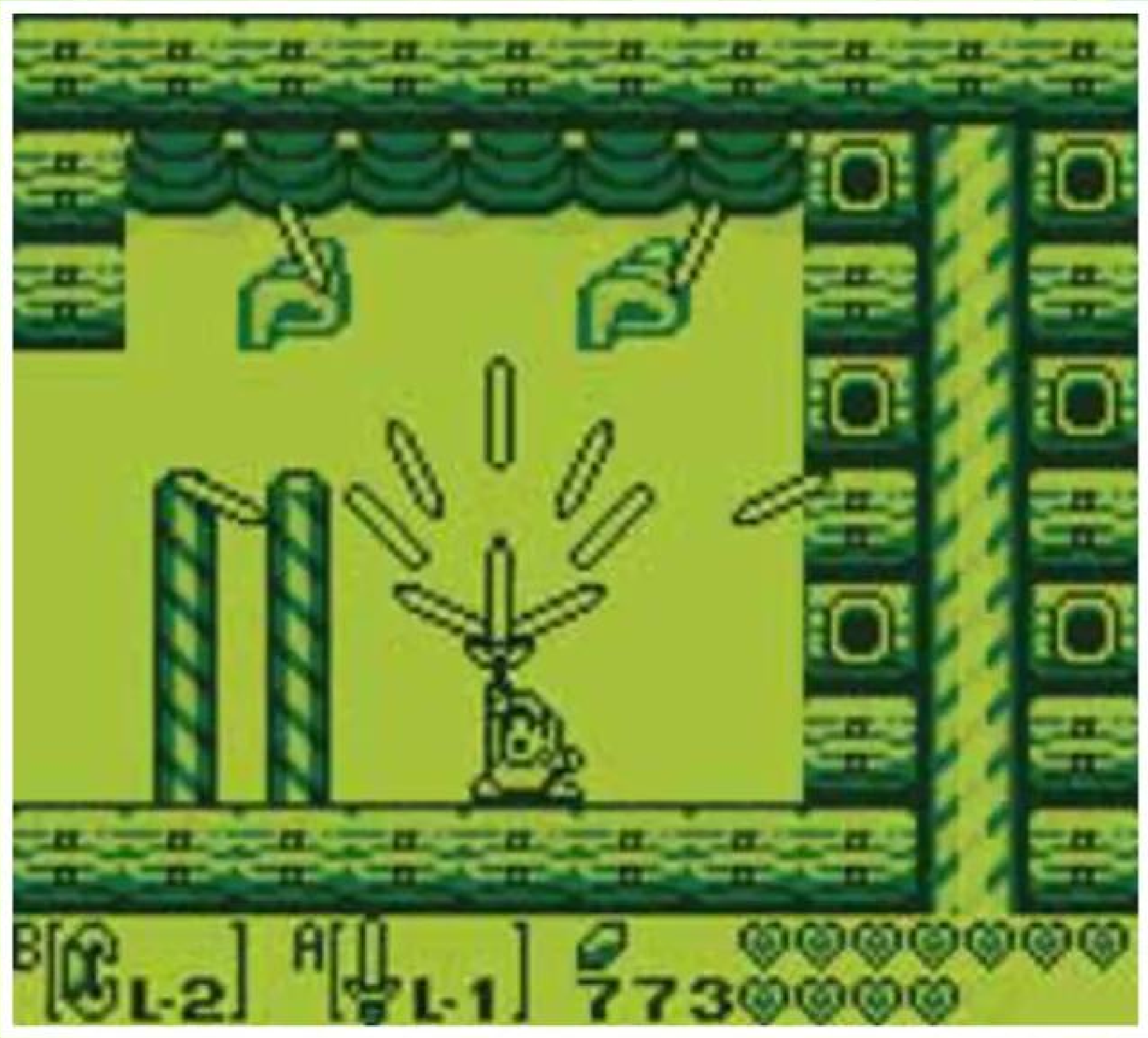


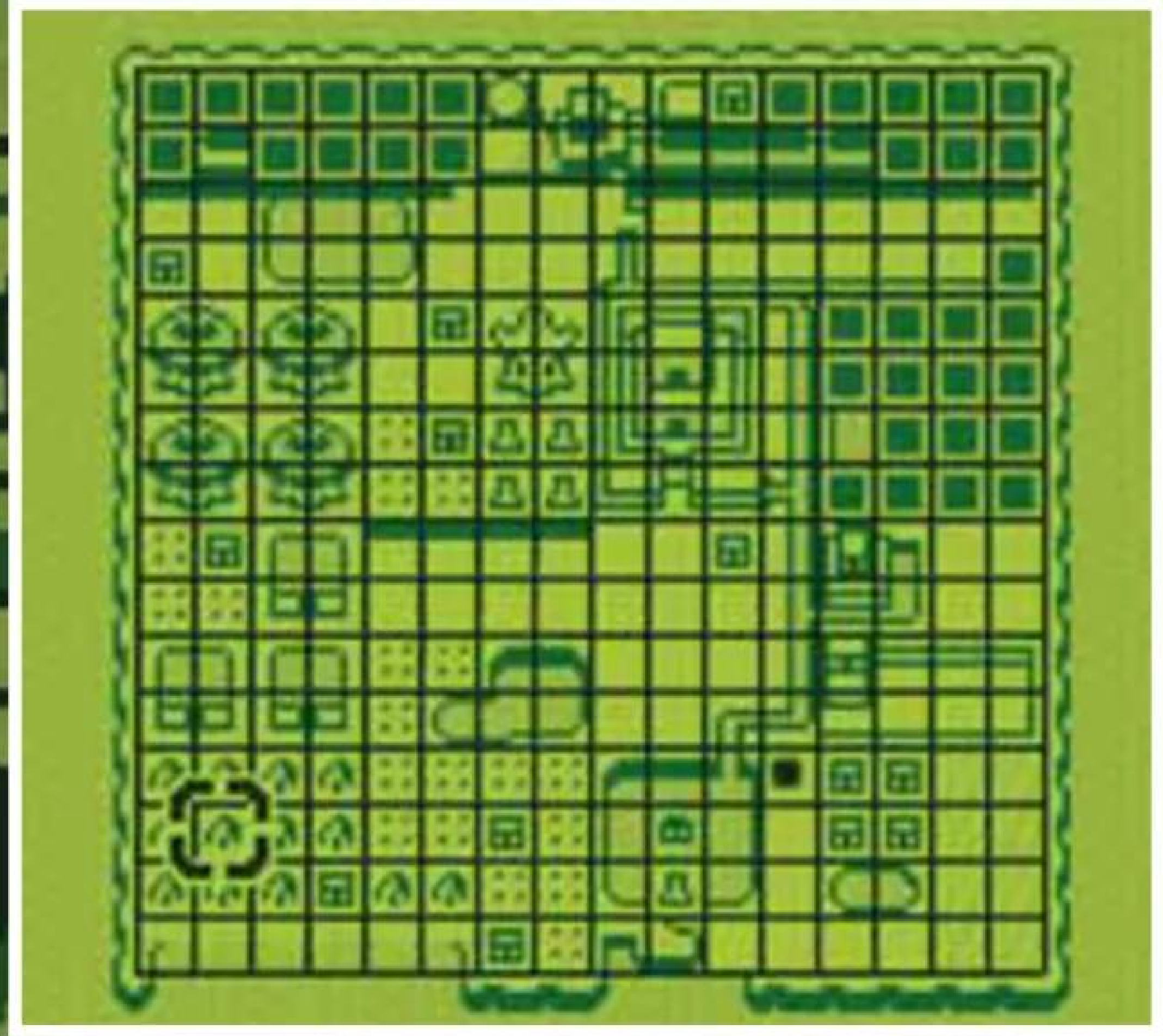
» Link is invincible while the Hookshot is extended, making throwing it out an easy way to avoid damage from certain attacks and enemies.

▶ Yoshi, Peach and even Prince Richard from *Link's Awakening*'s Japan-only Game Boy forerunner, *Kaeru No Tame Ni Kane Wa Naru*) and lashings of self-referential humour in a series that typically tends to play things pretty straight.

All of this combines to give *Link's Awakening* a very different flavour to most other *Zelda* games, and it's perhaps for this reason that it's not treated with the same reverence as notable series highlights such as *A Link To The Past* and *Ocarina Of Time*. For all its charm and whimsy, though, it's somewhat ironic that this clear outlier should be one of the most rigidly linear examples of traditional *Zelda* game structure, to the point where dungeons are literally numbered and cannot be tackled out of sequence. Conversely, the dungeons themselves feature virtually no such handholding after the first few, save for a handful of stone tablets that offer cryptic clues. Crucial items can be hidden in untelegraphed secret rooms, while some of the puzzles and chests require a level of lateral thinking far beyond the standard 'use the last item you picked up to overcome this' nature of so many other games in the genre.

We almost feel bad for *Link's Awakening*, and indeed for so many of the slightly quirkier *Zelda* games that came after it. They're inherently always going to exist in the shadow of the handful of truly genre-defining members of their own family, their own innovations and triumphs dwarfed by those of the two *Zelda* games that have a residency on just about every major all-time top ten list ever compiled. But it's important to remember just how much of an impact these less-discussed classics in the series help shape and evolve the all-time greats – by Eiji Aonuma's own admission in an *Iwata Asks* piece from 2010, *Ocarina Of Time* would have been a very different game were it not for innovations from *Link's Awakening* in the fields of broad narrative and character development. Interestingly, the same piece also cites *Twin Peaks* as an influence on *Link's Awakening*, which makes a heck of a lot of sense in retrospect. It's important to love and respect these series underdogs, then, since without them, the classics that dominate discussion of both series and genre simply would no exist. As if *Link's Awakening* weren't lovable enough already, that's just another reason it'll always be one of our favourite *Zelda* games. *





WALRUS

PEAHAT

SEA URCHIN

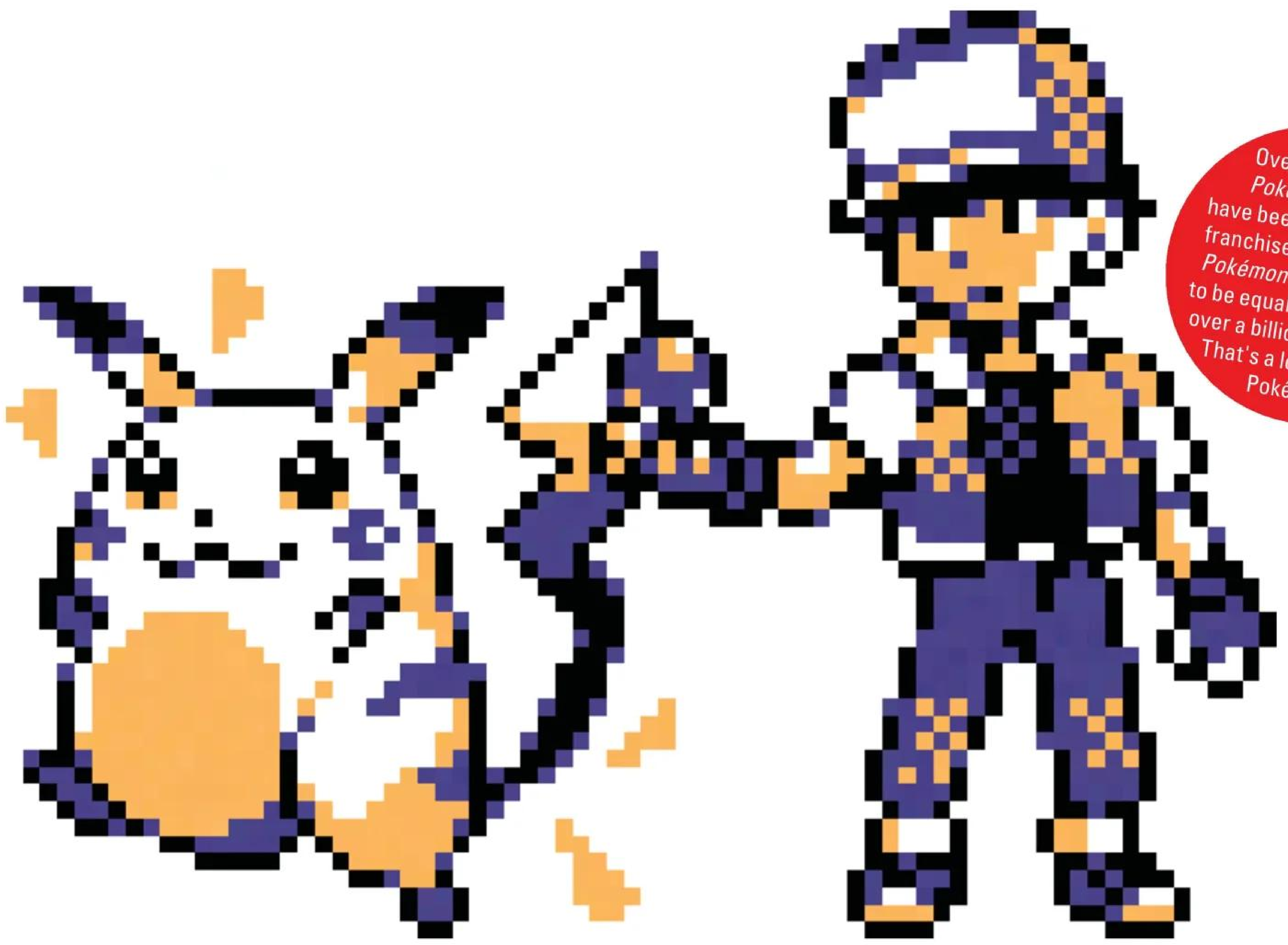
GRANDPA ULRIRA

GAME CHANGERS

POKÉMON RED/ BLUE/YELLOW

RELEASED: 1996 **PUBLISHER:** NINTENDO **DEVELOPER:** GAME FREAK **SYSTEM:** GAME BOY

Pokémon created a new generation of role-playing fans with the most brilliantly simple of youth-friendly ideas: collecting and swapping…



Over 300 million *Pokémon* games have been sold since the franchise began in 1996. *Pokémon Go* has proven to be equally popular with over a billion downloads. That's a lot of caught Pokémon!

Many of the kids who picked up *Pokémon* had probably never heard of an RPG before. When *Pokémon Red* and *Blue* arrived in 1999, the franchise had already blown up in the UK since the game released a year earlier in the US, with interest ballooning in the awful animated cartoon, the frankly odd-looking pocket monsters themselves and later the accompanying card game. It was a terrifyingly large craze that just happened to bring a somewhat niche genre to an enormous young audience, via some classically savvy Nintendo-branded game design.

This many years later, it's obvious that the game component of *Pokémon* had a kind of timeless merit, while other parts of the operation did not. The cartoon was far from impressive to look at, and could be painfully cheesy; the character designs only got progressively worse from Voltorb, Electrode and Ditto; the card game isn't the force it once was. *Pokémon Red*, *Blue* and later *Yellow* marked, for the young generation of the late Nineties, their first experiences of an RPG and the trappings of its mechanics, channelled beautifully through a well-structured adventure that challenged players to catch and level up their own pocket monsters. Players were offered complete customisation of their battle line-up in a world populated with almost 150 creatures to catch. They were all out there, somewhere – and only determined exploration, as well as collaboration with your friends, would reveal them all.

The compulsive mentality it tapped into for kids was very much the same thing that leads them to complete football sticker albums, or – a more modern example – finding diamonds in *Minecraft*. It's that completionist attitude, married to the ingeniously unpredictable

HOW IT TOOK OVER THE EARTH

POKéMON CONQUERED THE NINETIES AND BEYOND – THIS IS WHY IT HAPPENED

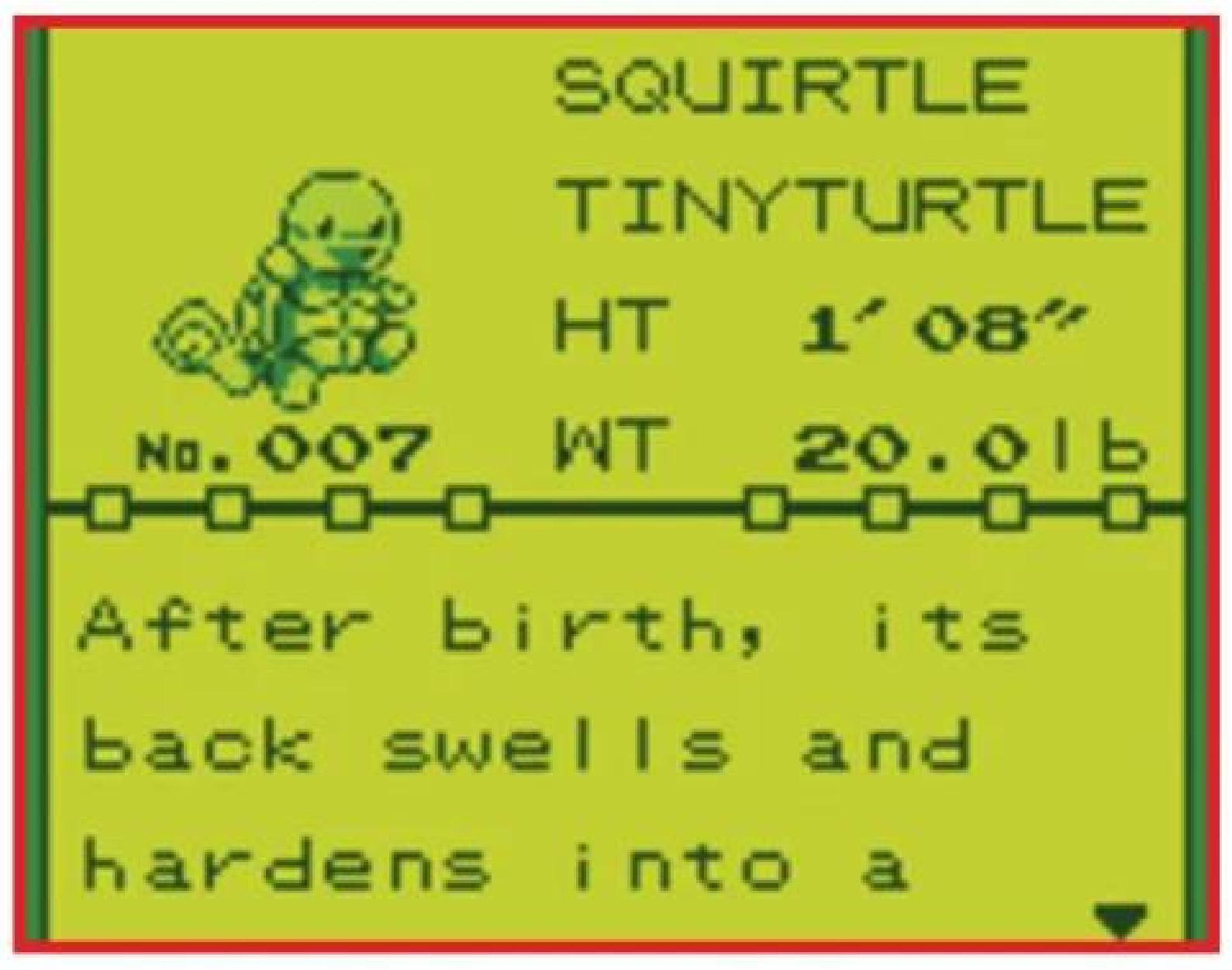
Nintendo
Pokémon mini

MULTIMEDIA

★Trading cards, LCD Tamagotchi facsimiles, toys and the somewhat repetitive TV show; *Pokémon* is a pop culture megalodon that dominates multiple forms of media. The card game isn't as massive these days, but it was all over playgrounds in the late Nineties.

CONSOLE SPIN-OFFS

★ *Pokémon*'s tendrils extended beyond the Game Boy, too, with amusing but thin N64 titles *Pokémon Snap* and *Stadium* finding significant success. A forgotten and reportedly rubbish curio, *Hey You Pikachu!*, allowed you to speak to the electric rodent.



SQUIRTLE
TINYTURTLE
HT 1′08″
No.007 WT 20.0lb
After birth, its
back swells and
hardens into a

ICONOGRAPHY

★We'd argue that Pokémon design has become rather uninspired in recent years, and even *Red* and *Blue* had the likes of Voltorb and Exeggcute to make the whole thing seem embarrassing. At the same time, many of the creatures were brilliantly designed.

CONSISTENCY

★ While the number bloated from 150 monsters to an exhausting 809 today, *Pokémon* has remained a very strong franchise. The task of catching them all is more intimidating than it used to be, but every generation has allowed the series to find new fans.

process of catching Pokémon, that underlined the appeal of *Red* and *Blue*. Yet it was the social interaction side of things that really altered industry thinking. *Pokémon Red* and *Blue* promoted use of the Game Boy's relatively obscure link cable as its founding conceit, that players would swap their Pokémon and battle with them using a pretty dusty old peripheral. The two different versions had 11 interchangeable monsters that could only be found on either *Red* or *Blue*, as well as four that could solely be obtained through trading with a fellow player; to complete your collection, Pokémon required you to interact with friends in order to get there, and many did. It opened up the potential of multiplayer experiences on handhelds in a way that we hadn't seen before.

There was something oddly powerful about the idea of sending a Pokémon that you'd raised over to a friend and receiving a brand-new one in return. *Pokémon*, after all, is basically about the battles that you fight and the creatures you fight them with – there was a sense of investment in that that's still entirely unique to this franchise and remains a big pull to this day.

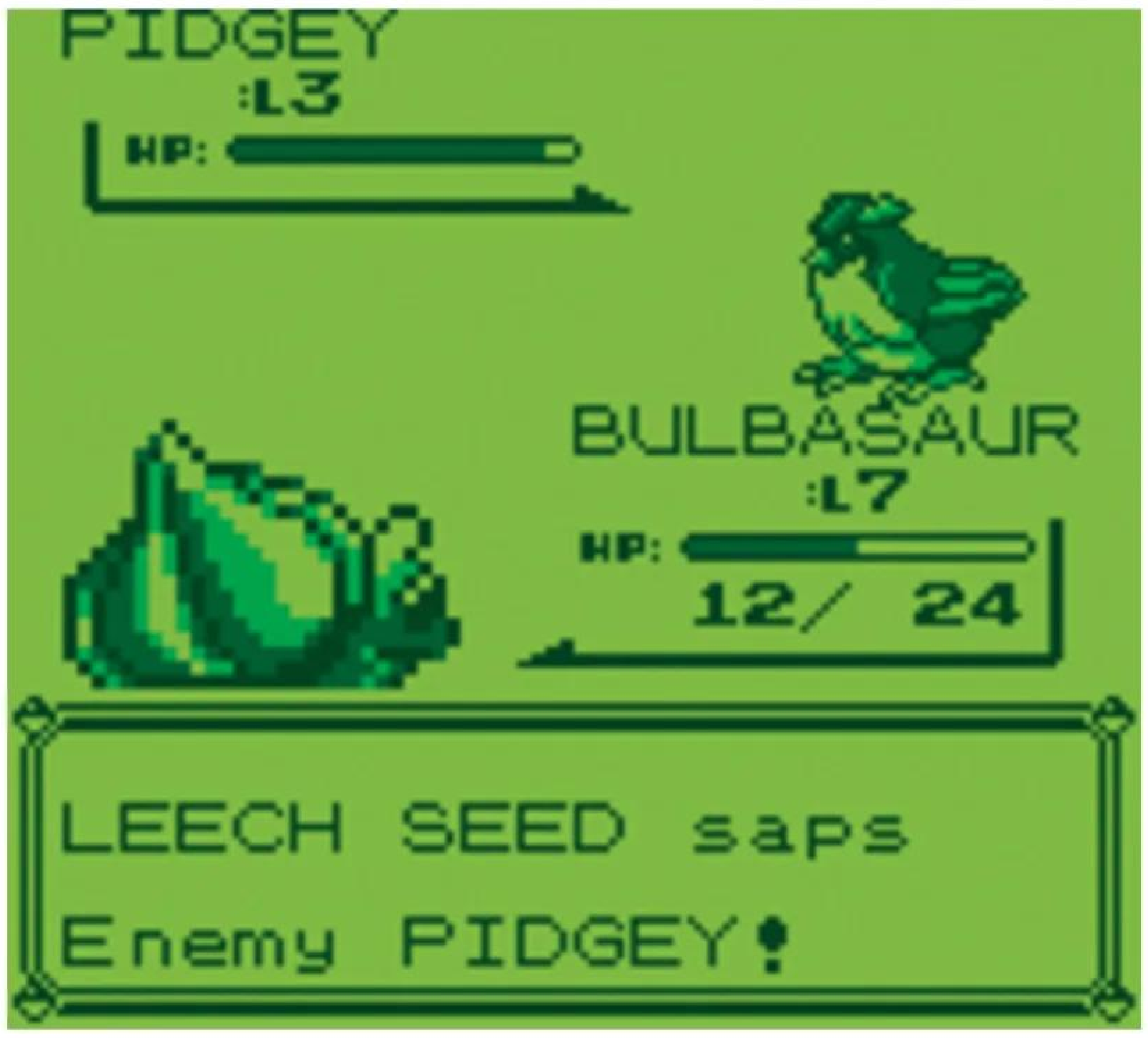
> **“Pokémon brought a niche genre to an enormous young audience”**

But the other, more adrenaline-fuelled half of the link cable functionality was arguably the most exciting part of it all. The combat component to the multiplayer was essential, bridging two players' massive adventures and adding some genuine personal stakes as you pit your two sets of monsters against each other. Players could strategise in these scraps, instead of contending with frequently silly AI that spams nothing attacks like Tail Whip and Growl in the midst of crucial battles. An entire worldwide phenomenon of competitions grew out of these two incredibly smart but simple uses of an old peripheral that had first been released a decade earlier.

It could be argued that the series has become ruthlessly complicated in recent years, piling on more characters in a way that doesn't really add to the quality of the product, even as the realisation of the settings and creatures has become so much richer.

KEY FACTS

- When you catch all 150 Pokémon, you're given a Game Freak diploma in Celadon City. Not that exciting, really. We'd at least want a key to the city from the mayor.
- Pokémon actually began life as 'Capsule Monsters' in 1990, and was put on hold as the team at Game Freak worked on *Yoshi*. The first early design for Lapras existed then.
- Combined, *Pokémon Red, Blue, Yellow* and *Green* (the Japanese original version of *Blue*) have sold over 30 million units in total. They still reign as the highest selling games in the entire series.



LEECH SEED saps
Enemy PIDGEY!

» This classic battle scene will be familiar to millions.

Any kid who wants to catch 'em all these days needs a bottomless pit of time and overly generous parents to accumulate all the necessary titles – that seems counter to the binary simplicity of what *Red* and *Blue* originally represented. You and your friends, separately invested in your own adventures, collected Pokémon to your obsessive satisfaction. Then, on the most unlikely of formats, you brought your two adventures together to complete that experience.

The effect *Pokémon* had on the gaming landscape went far beyond the boundaries of its own success, however. Nintendo had stealthily introduced millions of players to the previously niche RPG genre, on an even bigger scale than *Final Fantasy VII* did in 1997, using its colourful setting and characters as a Trojan horse for what is undoubtedly fantastic and complex, stat-driven combat design. While visually speaking, *Pokémon Red*, *Blue* and were made to appeal to children, the actual meat of the experience was mature enough to give it a multi-generational appeal. *Sword* and *Shield*'s release this year on Switch only underlines that status – this franchise will live on forever, and rightfully so. ✱

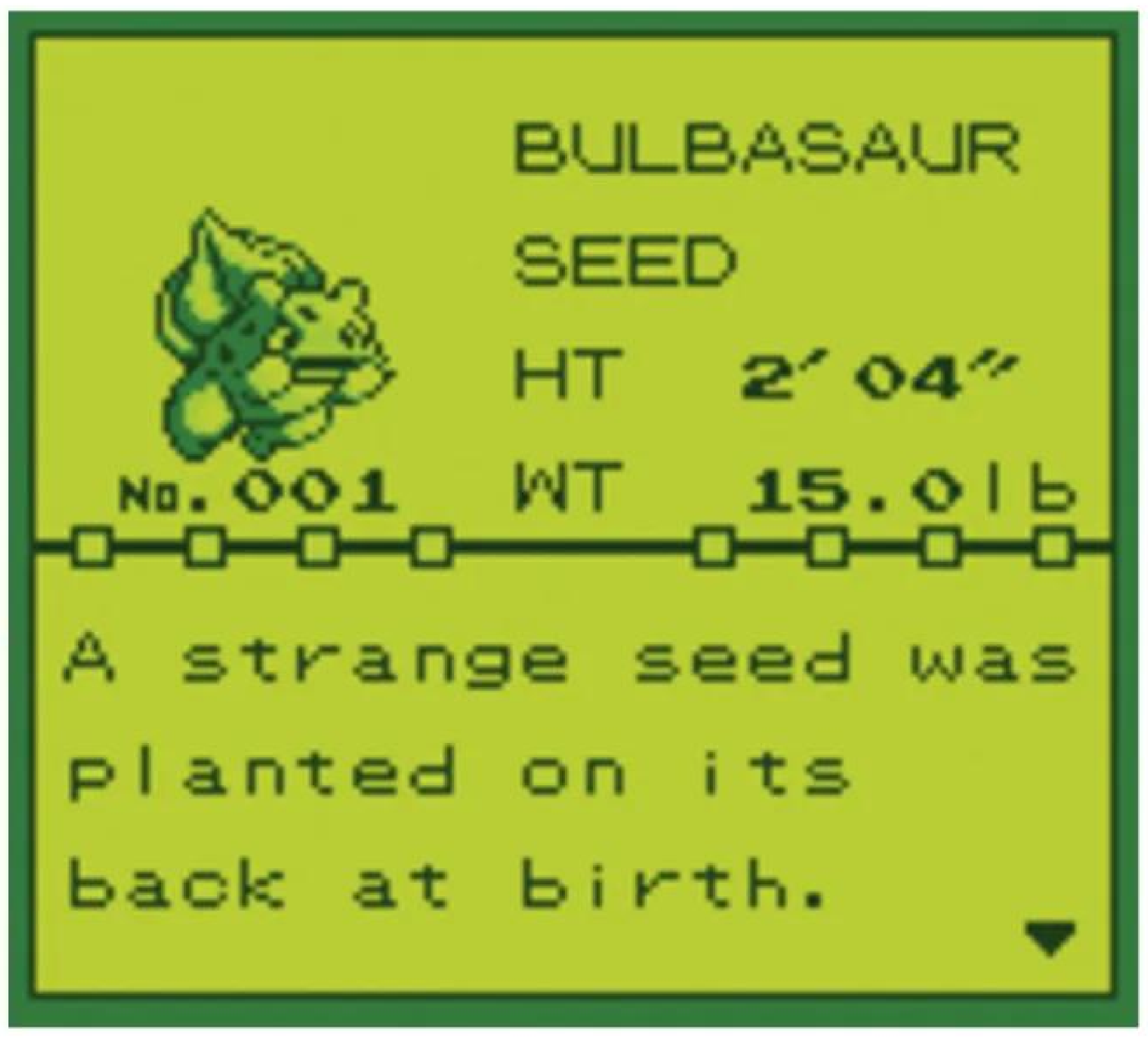
GAME CHANGERS

KEY LESSONS FROM RED, BLUE & YELLOW

From those hundreds of hours invested in Pokémon in the late Nineties, these are some of the most the vital pieces of info that will live with us forever

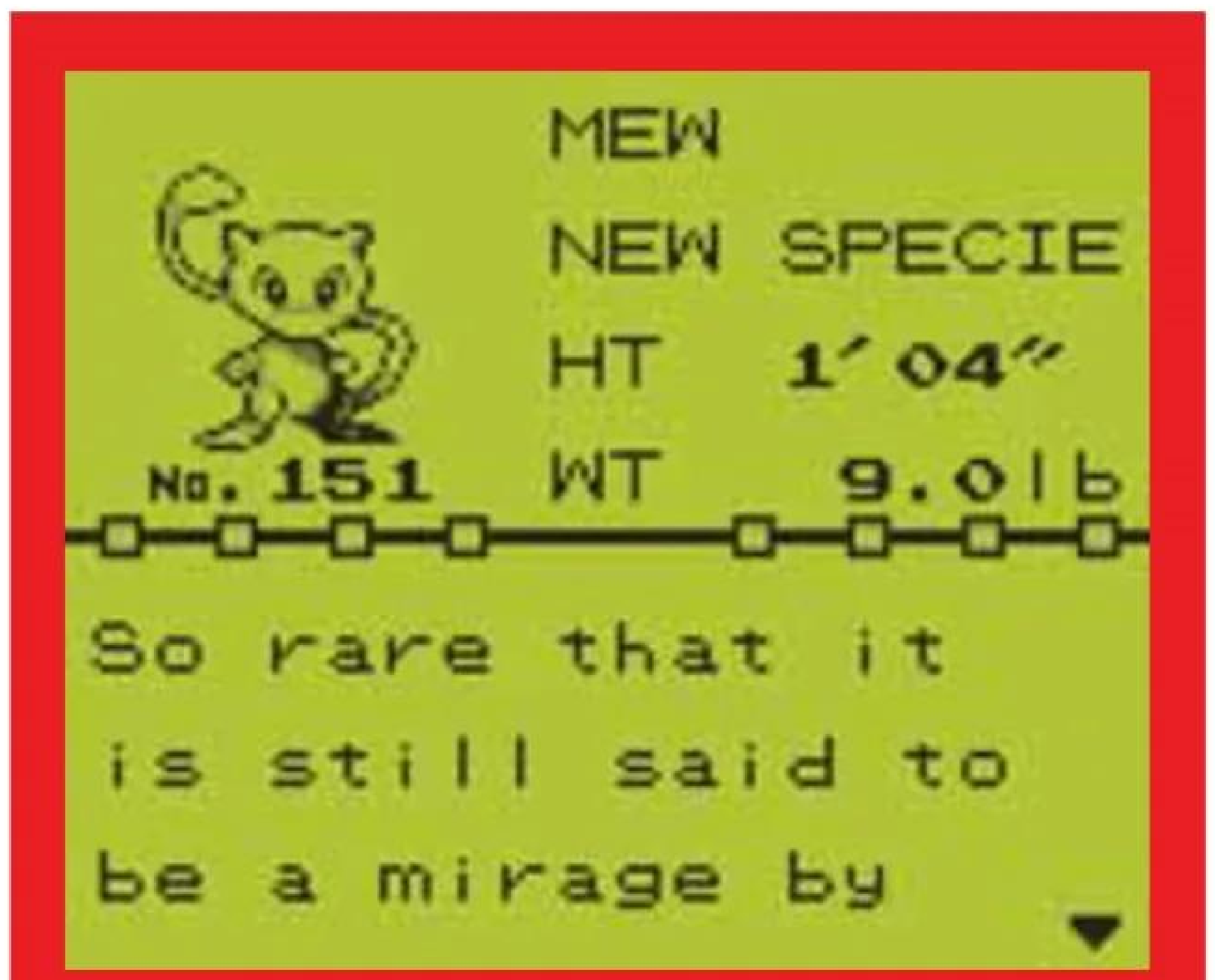
1 BULBASAUR IS THE BEST STARTING POKÉMON

■ Although squirtle is a relatively close second place, Bulbasaur will blitz through early gym leaders Brock and Misty as soon as you have unlocked the Vine Whip skill. The evolutions into Ivysaur and Venusaur bring steadily more powerful abilities, too, underlining the fact that Bulbasaur makes the game a lot easier.



BULBASAUR
SEED
HT 2′04″
No.001 WT 15.0lb

A strange seed was planted on its back at birth.



MEW
NEW SPECIE
HT 1′04″
No.151 WT 9.0lb

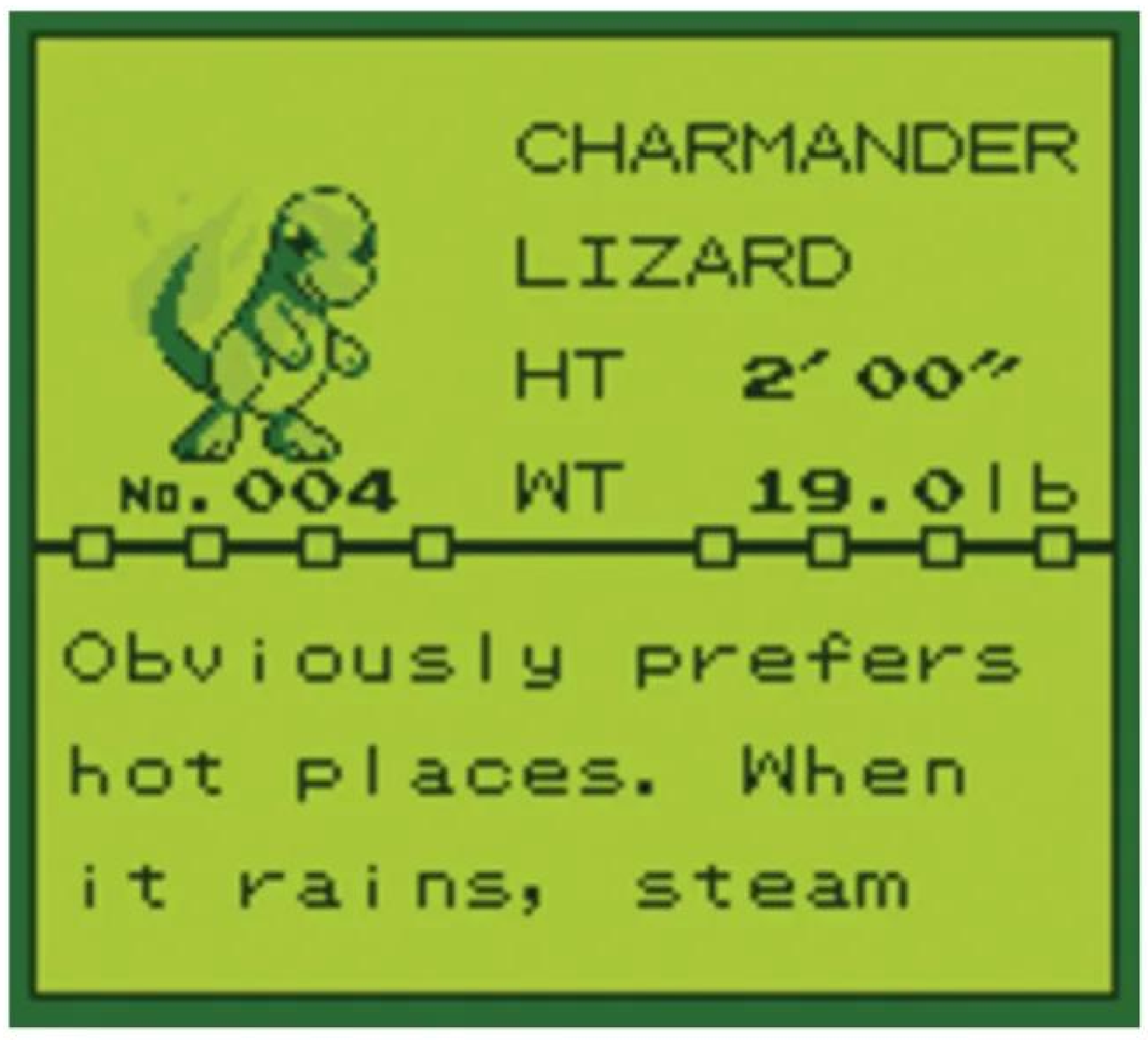
So rare that it is still said to be a mirage by

2 YOU CAN EASILY CATCH MEW BY USING A GLITCH

■ Mew being an exclusive Nintendo giveaway was, let's face it, a bit of a slap in the face to the consumers who couldn't afford to attend such insanely specific events. It's comforting to know, then, that in 2003, a smart Pokémon player worked out that you could glitch the game using a specific trainer battle near Cerulean City to easily catch him.

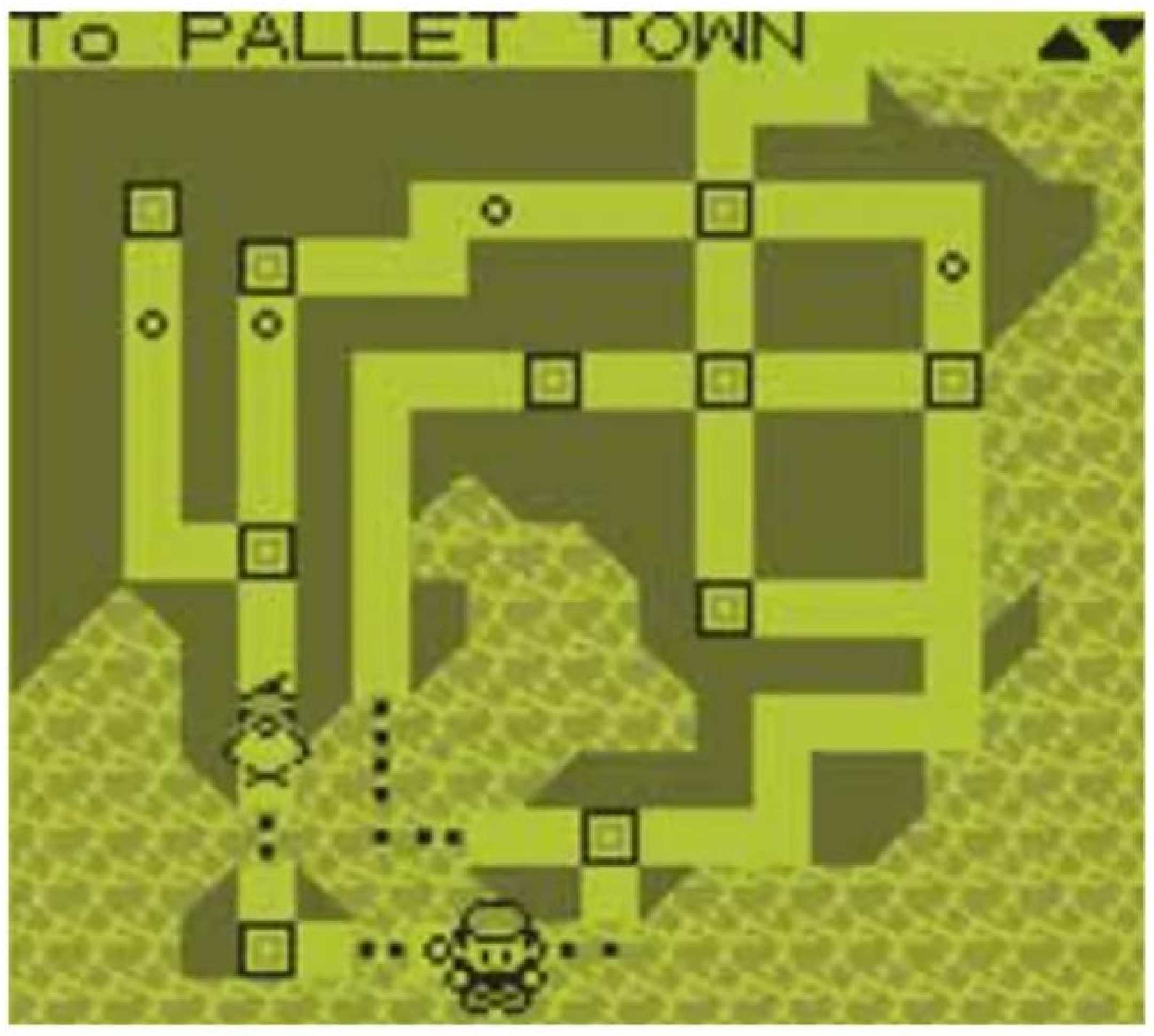
3 CHARMANDER IS THE WORST STARTING POKÉMON

■ Charmander is a poor choice of starting Pokémon, really, even if this tiny dragon features the best character design of the three starters, as it fails massively in the face of anti-fire gym leaders Brock and Misty. We've no doubt many players picked Charmander right away when they started the game – it makes that first half of the game a chore.



CHARMANDER
LIZARD
HT 2′00″
No.004 WT 19.0lb

Obviously prefers hot places. When it rains, steam



To PALLET TOWN

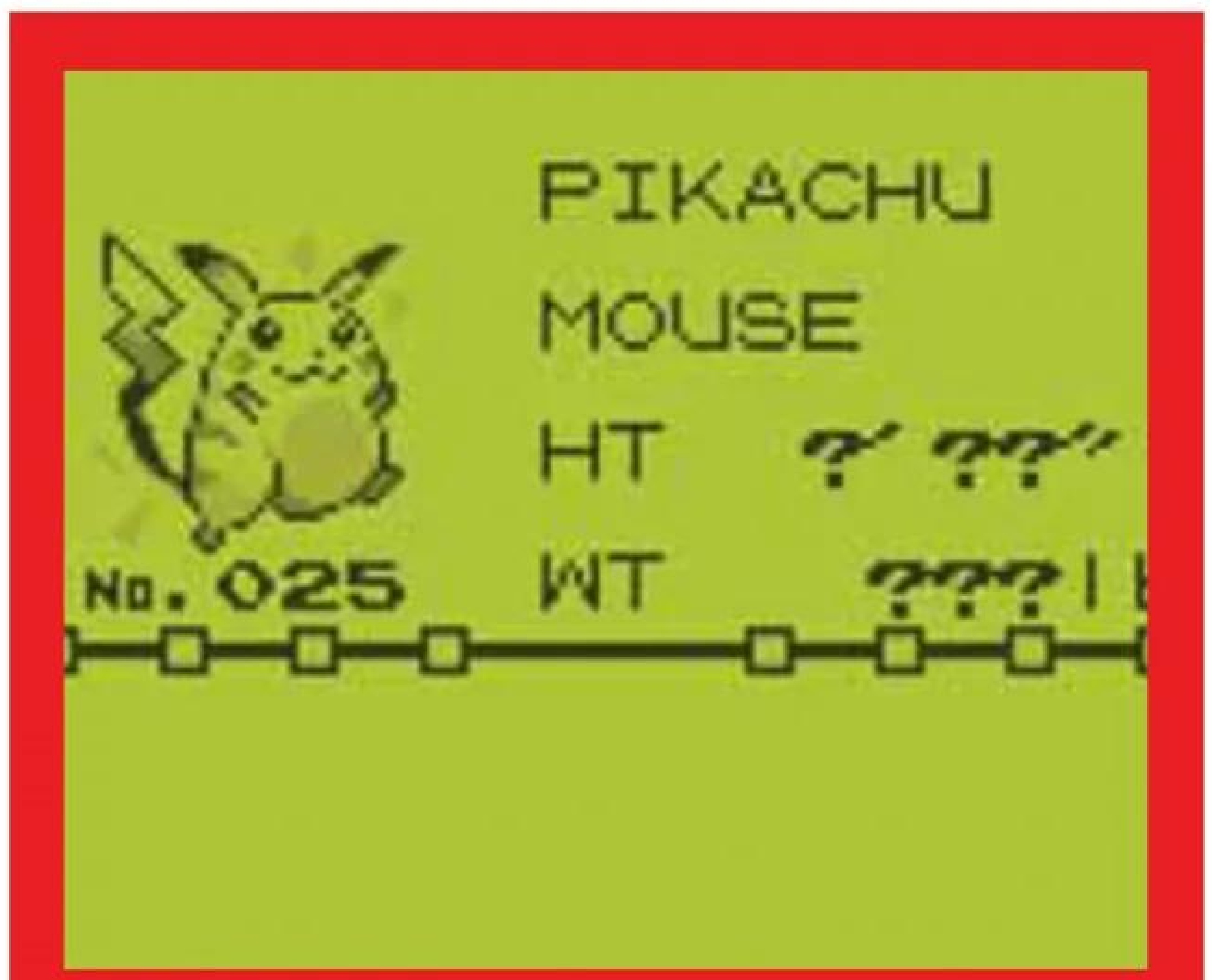
4 DON'T TEACH BAD HMS TO GOOD POKÉMON

■ The Pokémon we taught Flash to were borked forever, basically. And for what? A glorified version of Smokescreen that occupies an ability slot forever. Aside from Surf and maybe Fly, HMs (Hidden Machines) will quite simply spoil your veteran Pokémon by limiting their potential to learn the more effective TMs later in the game.

Wild WEEDLE appeared!

5 MISSINGNO IS THE WORTHIEST OF GLITCHE

■ One of the most popular videogame glitches of all time, Missingno is, for better or worse, a part of *Pokémon Red* and *Blue* that all players should seek out simply for the weirdness of fighting a living barcode that can give you multiple Master Balls. We will never forget how to do it. First, speak to the man in Viridian City…

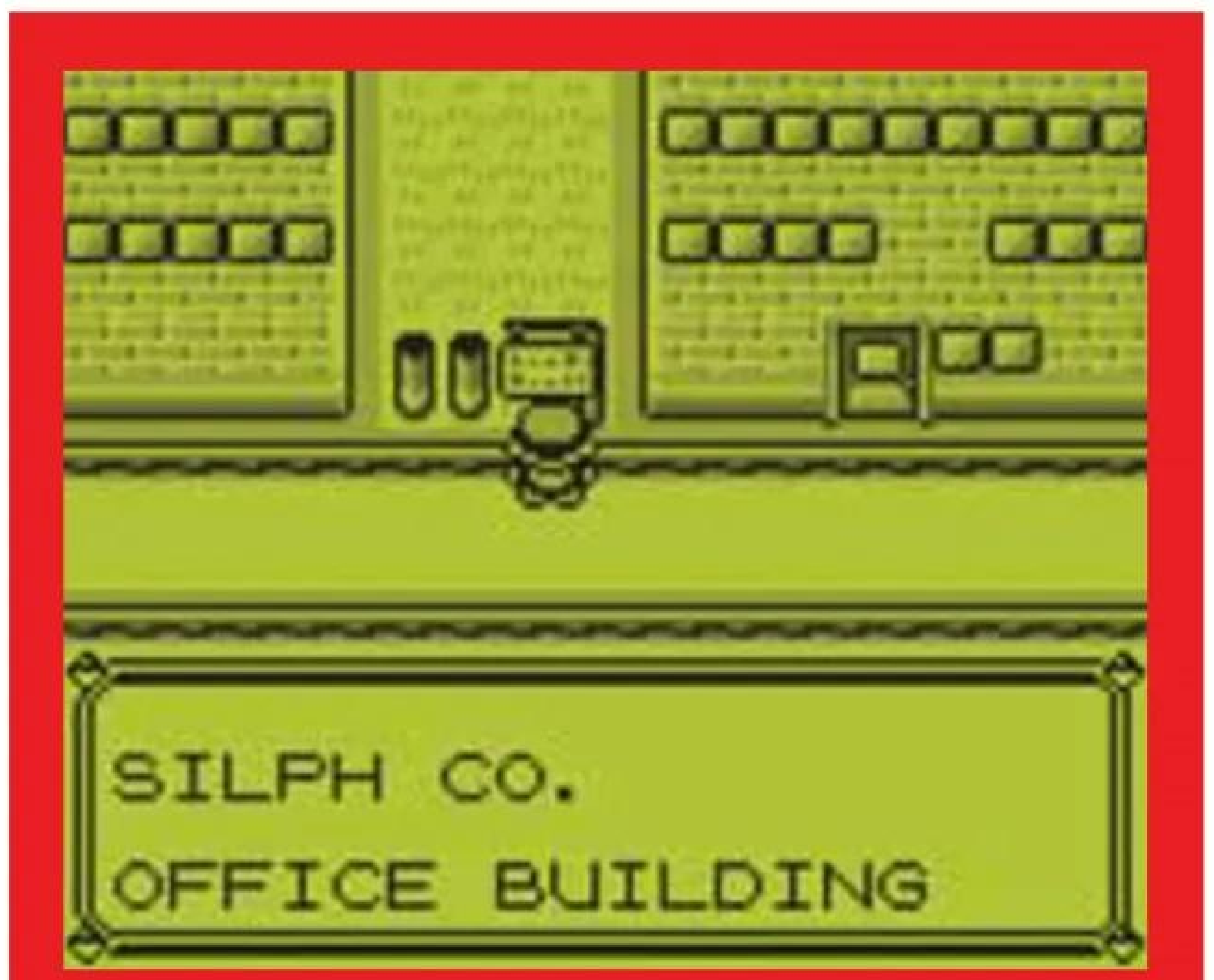

PIKACHU
MOUSE
HT ?′??″
No.025 WT ???lb

6 PIKACHU IS A REALLY PATHETIC FIGHTER

■ Every Pokémon player in the land no doubt sought out the Pikachu early on in Viridian Forest, since the character was the face of the franchise, but creature's appalling defensive capabilities meant that Pikachu was a total waste of energy, aside from the far superior Yellow version 'Ash' one, which was yours from the start of the game.

7 POKÉMON YELLOW IS THE DEFINITIVE VERSION

■ If you endured the torrent of late Nineties Pokémon culture, *Yellow* is unmissable, dovetailing with the story of the television show in a more pronounced way, with Pikachu always by Ash's side and all three starter Pokémon (Bulbasaur, Charmander, and Squirtle) handed to you as part of the story. It also looked slightly better on the GBA.

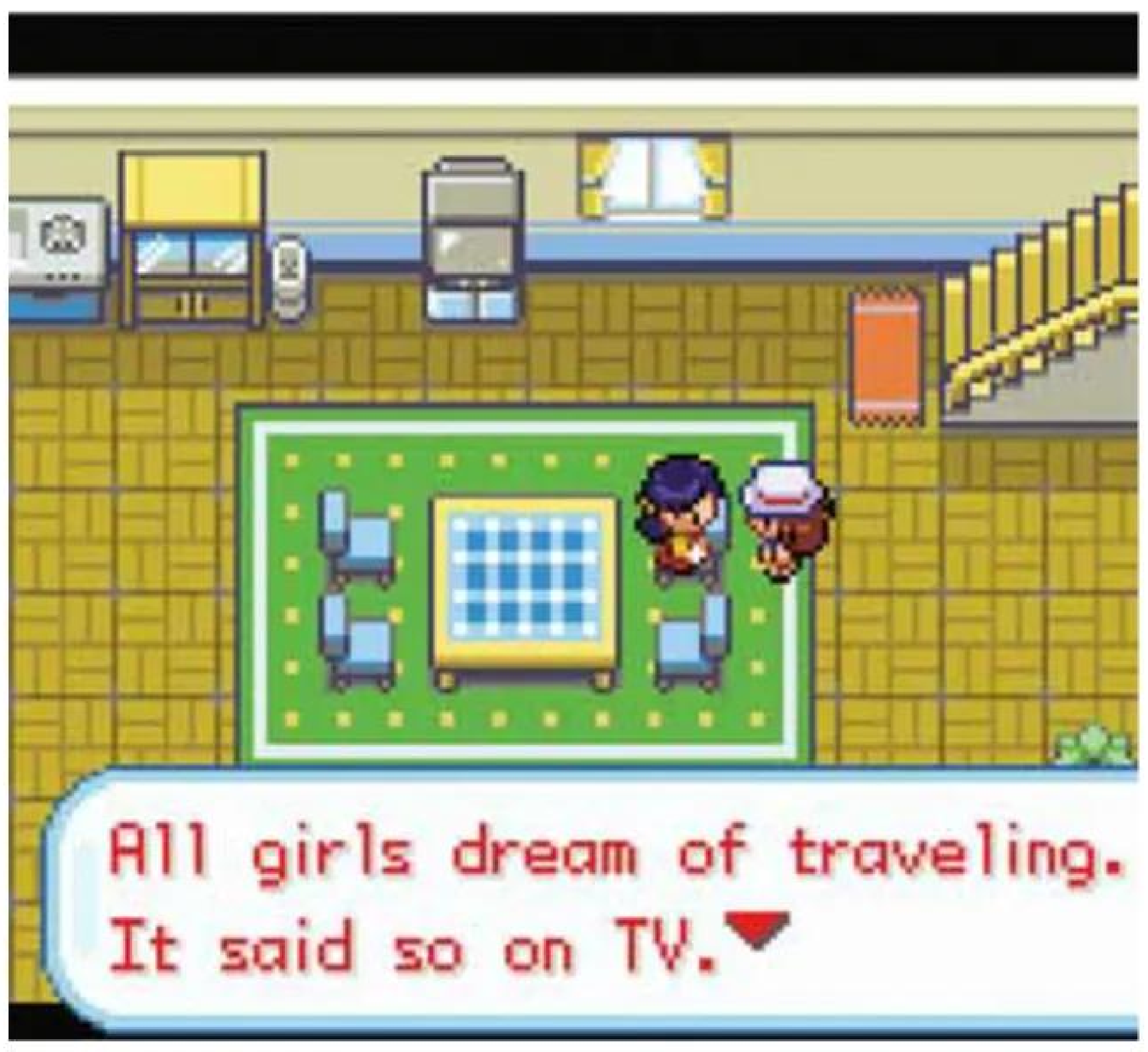

SILPH CO.
OFFICE BUILDING

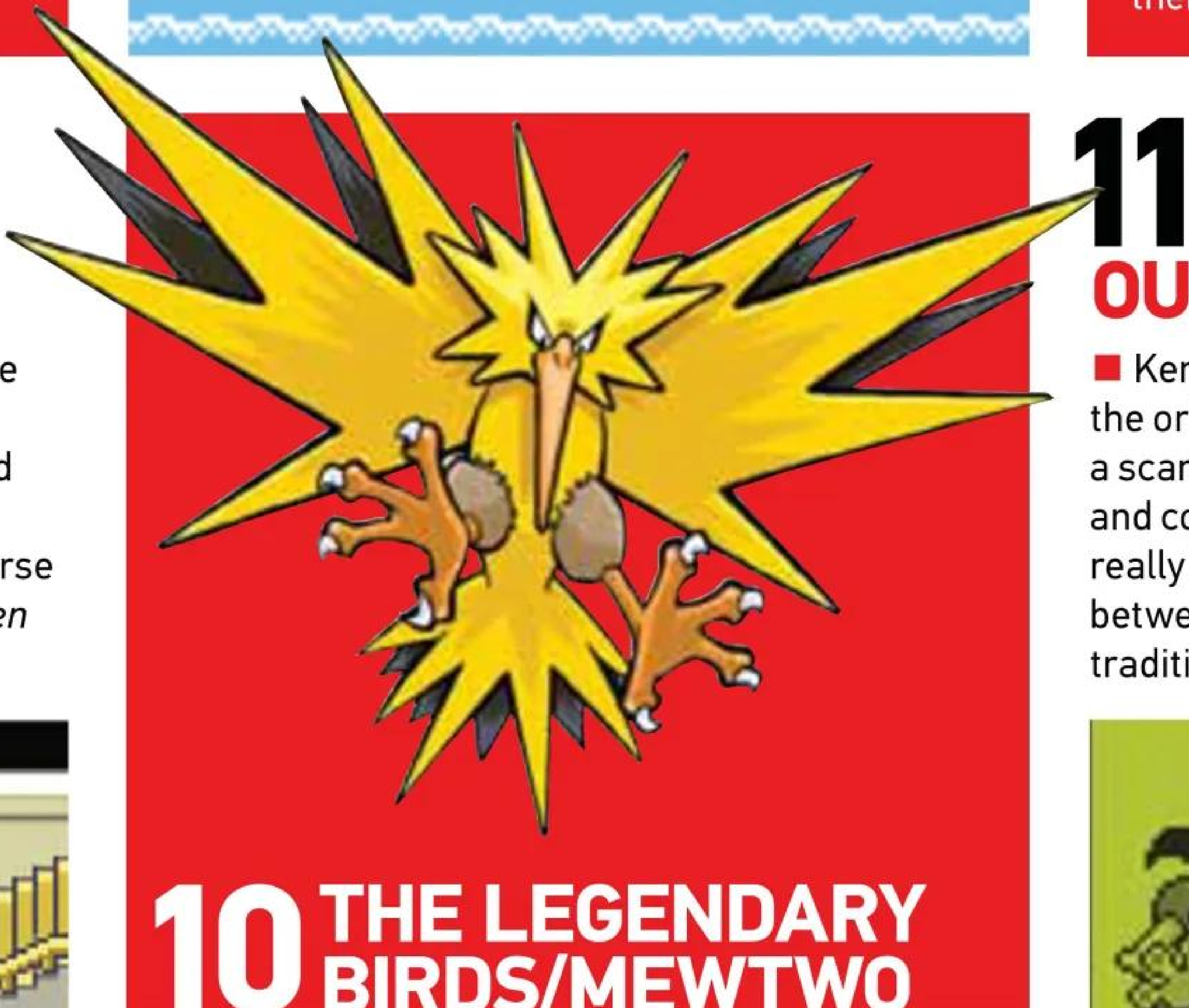
8 SILPH CO IS THE WORST BIT OF THE GAME

■ It just goes on for too long, and marks the least exciting part of the game. Team Rocket's Saffron City headquarters is like spending two hours stuck in a grey Eighties office block that marks the ultimate test of patience in *Pokémon Red*, *Blue* and *Yellow*. To be honest, we're surprised that the Pokémon craze didn't end there and then.

9 THE GAME BOY ADVANCE REMAKES ARE ESSENTIAL

■ *FireRed* and *LeafGreen* offers players the chance to play as a female character instead of the usual dorky lad, but it's the visual upgrade that heralded the biggest change, bringing all 151 Pokémon a contemporary polish that consumers were of course happy to buy into. It also brought a version of *Green* to the West for the first time.


All girls dream of traveling.
It said so on TV.

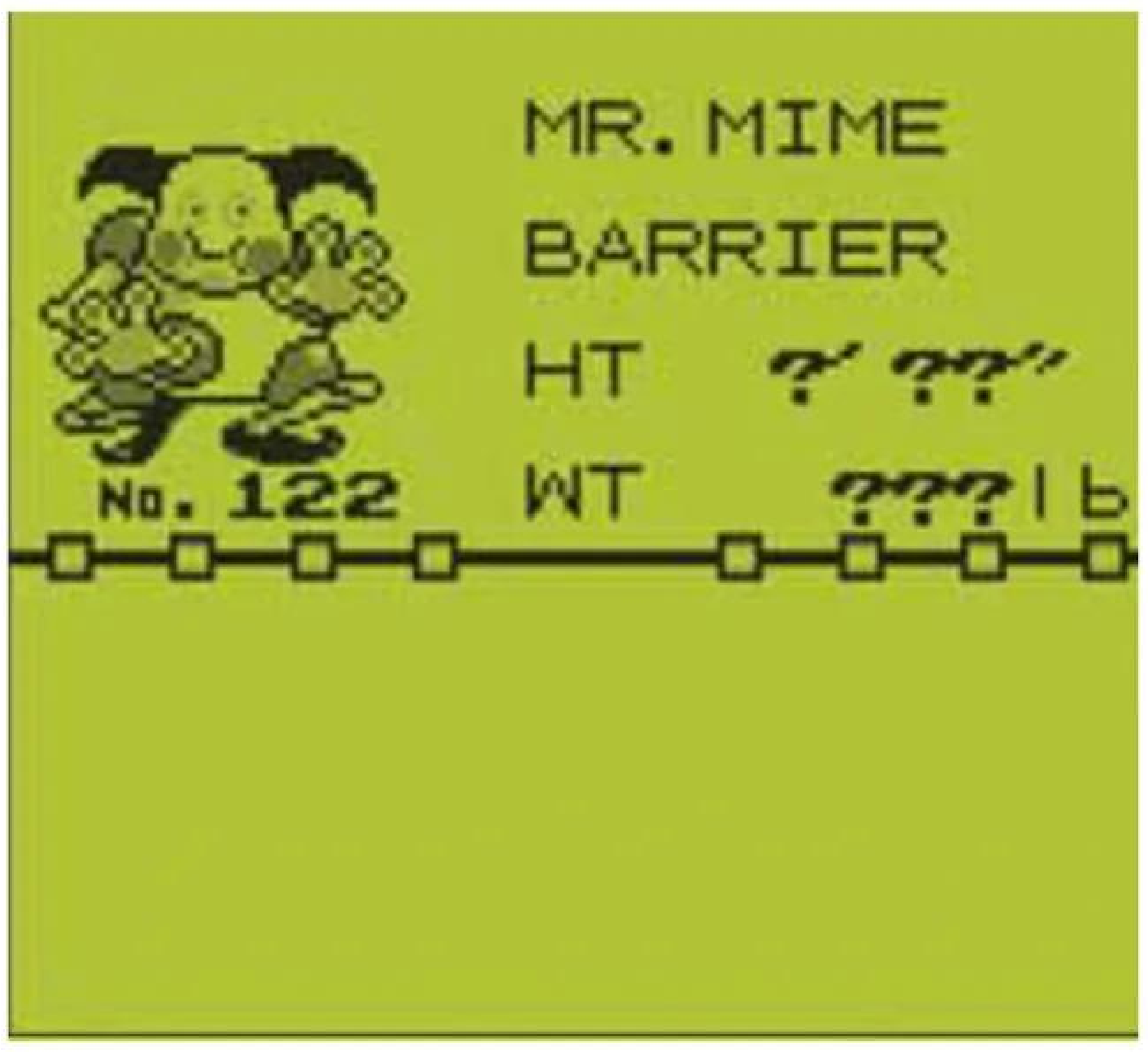


10 THE LEGENDARY BIRDS/MEWTWO ARE THE BEST BITS

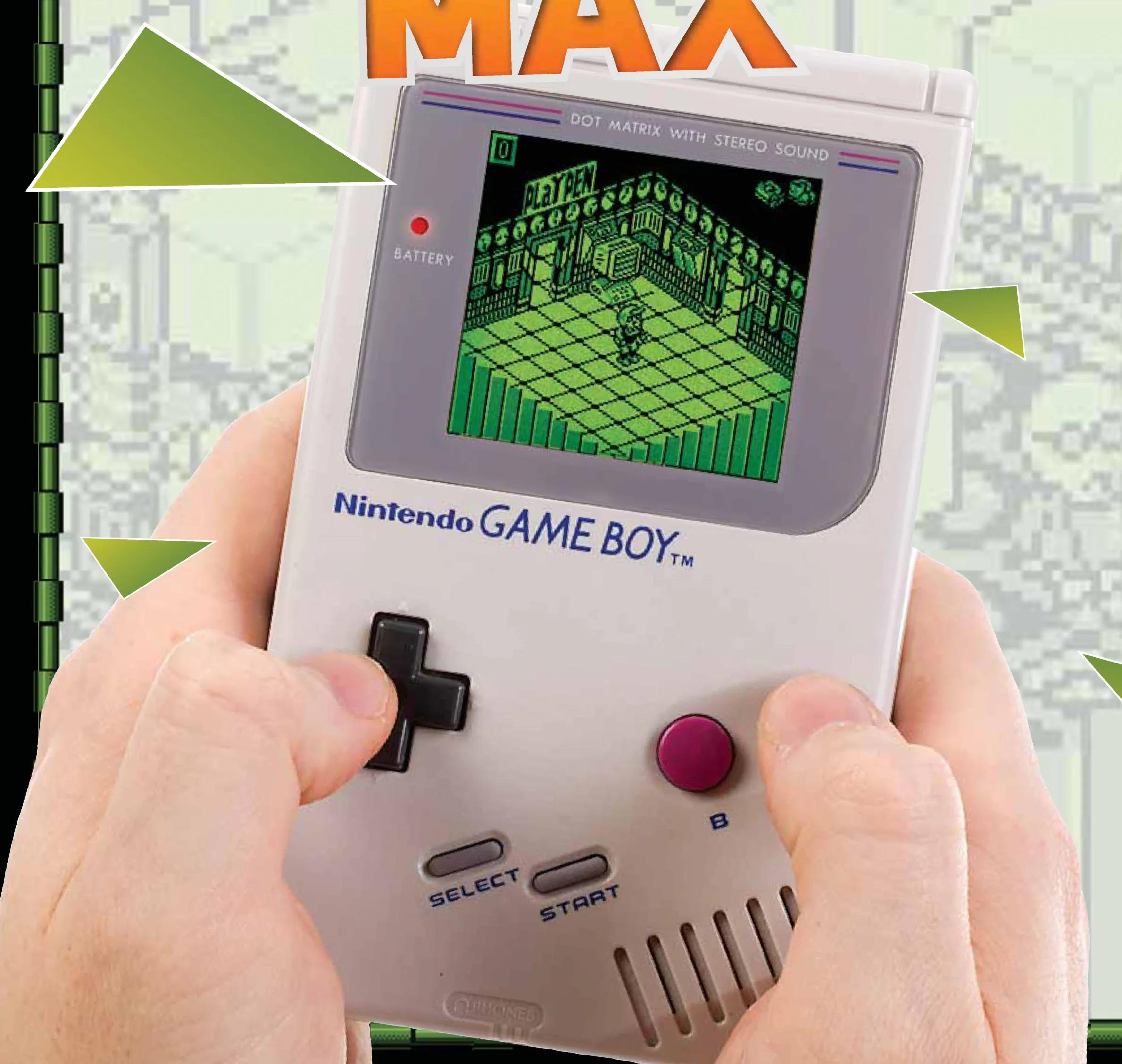
■ Searching for them, finding them, catching them. These side quests feel like proper mini adventures, with each of Articuno, Zapdos and Moltres all residing in remote, vaguely creepy locations, adding a sense of wonder to an otherwise straightforward adventure, with Mewtwo also out there waiting to be found post-credits.

11 MR MIME WILL HAUNT US UNTIL OUR DYING DAY

■ Ken Sugimori, the designer of every Pokémon in the original games, managed to unleash on the world a scarier creation than Jason Voorhees, Slenderman and combined. Mr. Mime (is there a Mrs. Mime? We really hope not) is fairly useful in battle as a buffer between fighters, but his design goes well beyond the traditional realms of terror.


MR. MIME
BARRIER
HT ?′??″
No.122 WT ???lb

MONSTER MAX


DOT MATRIX WITH STEREO SOUND
0
PLAYPEN
BATTERY
Nintendo GAME BOY™
B
SELECT
START
PHONES

After the acclaimed Batman and Head Over Heels wowed Spectrum owners, Jon Ritman and Bernie Drummond took their isometric magic to the Game Boy. Craig Grannell interviews the pair about working on the new platform, rethinking design for handhelds, and their publisher's baffling decision to scupper the game's chances of success

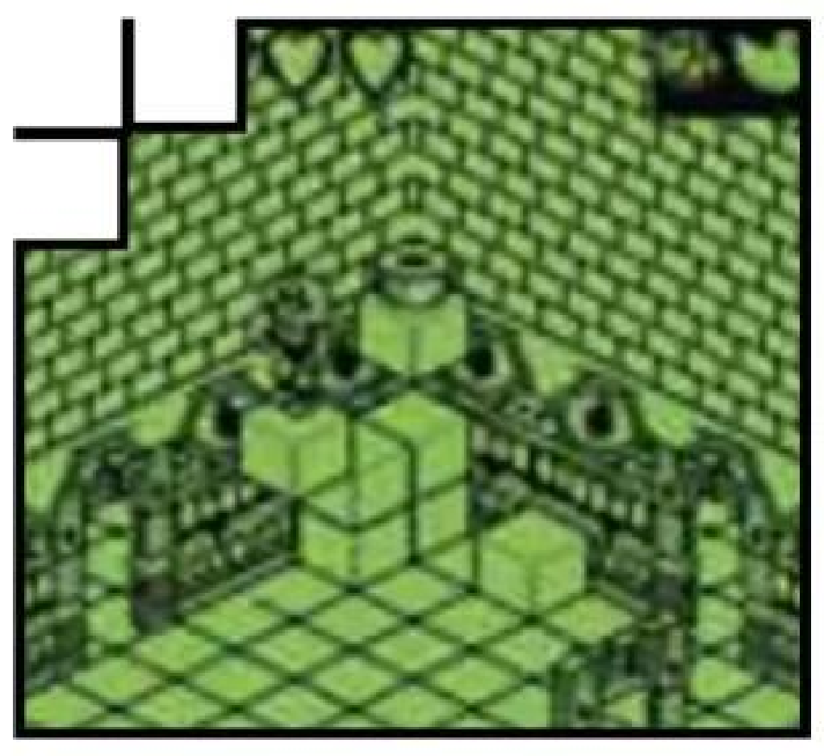
With two Ultimate-style hits – *Batman* and *Head Over Heels* – under his belt, perhaps it was fate Jon Ritman would eventually find himself working with Ultimate successor company Rare. He recalls reading a magazine article about the company looking for new talent, and then visiting and it not even crossing his mind they wouldn't want to work with him. "It must have been quite arrogant of me at the time, but we did have a laugh about it later, and I had plenty of late-night conversations with Chris Stamper, when we both did our best work," says Jon.

Much of his time was spent working on a development system, and when that was finished, Jon figured he'd like to make a game with it himself. "I decided to work on the Game Boy, which seemed like a fun console, and decided on an isometric adventure because I'd not seen that at the time on the platform," says Jon, reasoning that games to that point had perhaps been driven in a certain direction by hardware. "Remember, I'd learned my trade working on a pretty open-ended ZX Spectrum, and I did what I wanted. The Game Boy came with the likes of hardware sprites, and if you make it easy for people to go down a certain route, of course they will. I thought it'd be good to buck the trend and try something different!"

The game he created would become *Monster Max*, an epic and visually striking isometric adventure packed full of puzzles, twice the size of *Head Over Heels*. Once again, Jon enlisted regular co-conspirator Bernie Drummond to work on the game's graphics. "Personally, I loved the isometric 3D format – it seemed more immersive than standard platform or top-down games," Bernie says, adding that with the Game Boy having a Z80-style chip and more memory than the Spectrum, Jon was able to "easily convert the isometric game format" to the tiny handheld. He adds that "the main worry was the screen size" and most of the duo's time was therefore spent drawing graphics, building the map and designing the rooms.

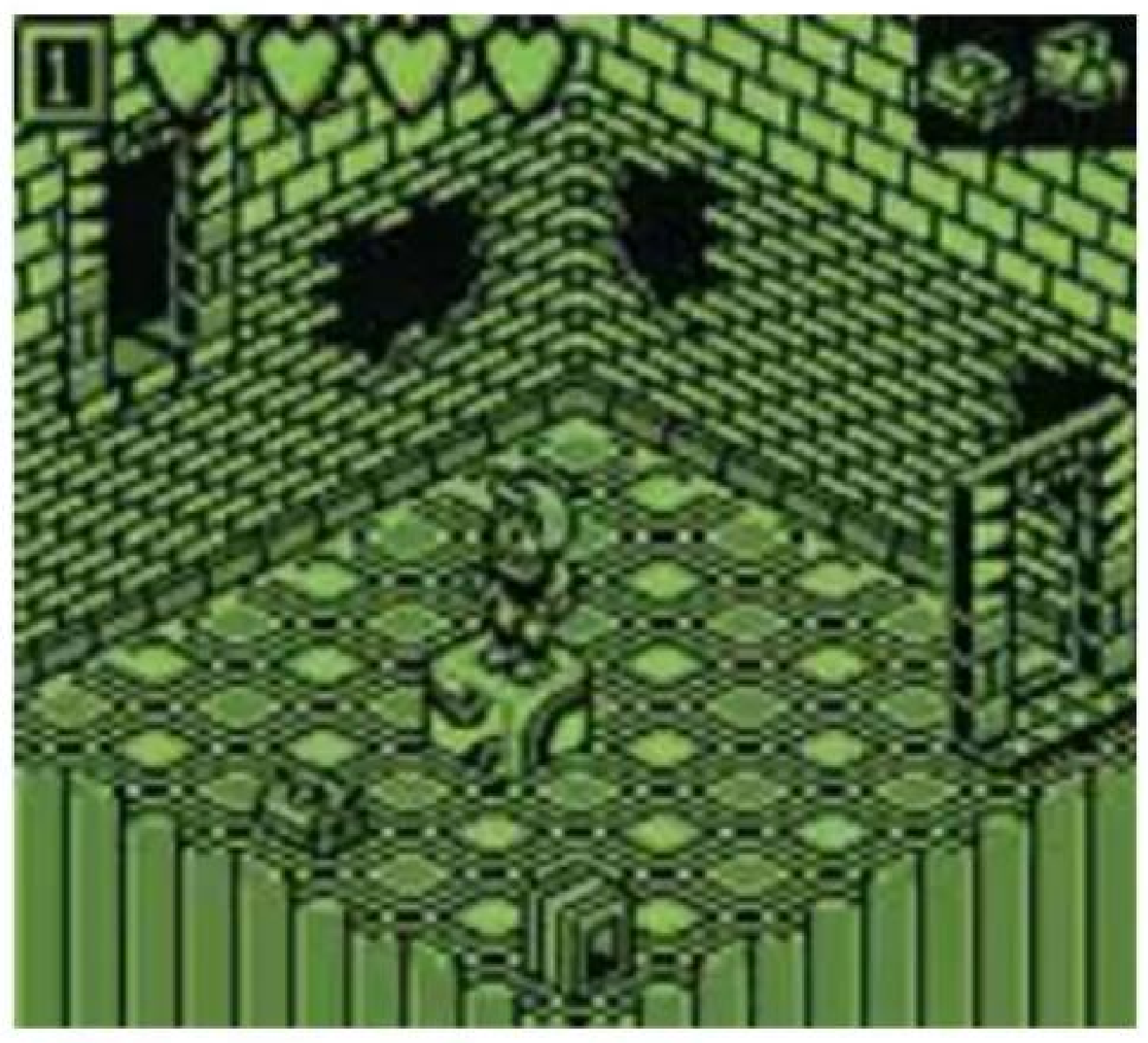
Jon's quick to point out it wasn't entirely plain sailing, however: "The engine was a complete rewrite, because the Game Boy chip is really a kind of 'Z80 lite', and the console clearly wasn't designed to do anything with a full high-res screen. It required some jiggery-pokery to make it do that, switching character sets two-thirds of the way down the screen, making use of careful timing." He adds that it was also a pain working with paged memory on the Game Boy, where you were constantly having to move memory in and out of usable space: "It could get quite difficult when you needed something to be available in different areas but you were using a different bit of paged memory. There was a lot of juggling involved to get everything working in *Monster Max*, because you didn't want to be paging memory in and out when you were in a room – it would have slowed things down. That said, at least I had the memory, which I didn't on the Spectrum, although it would have been nice to have also had a bit of colour!"

Still, in having to create a new engine, Jon was able to incorporate ideas that took the kind of isometric adventures he'd previously created to a new level. "I wanted rooms to be bigger than the screen, to manage rooms with different floor levels, and to have a new way of handling tools," he says. On that last point, he explains *Batman* and *Head Over Heels* had characters where abilities were essentially 'removed' ▶

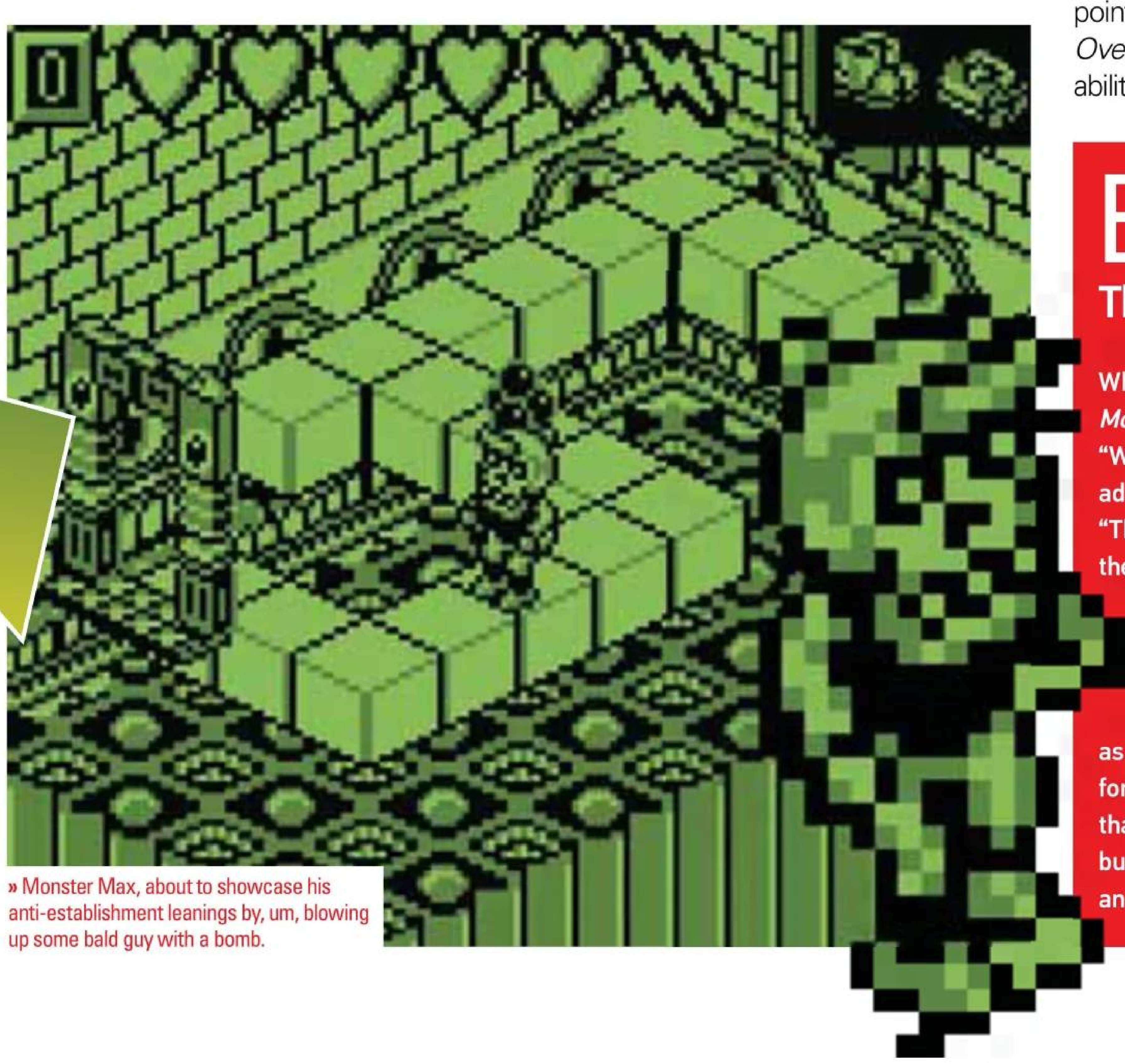


IN THE KNOW

- » **PUBLISHER:** TITUS
- » **DEVELOPER:** RARE
- » **RELEASED:** 1994
- » **PLATFORM:** GAME BOY
- » **GENRE:** ISOMETRIC ADVENTURE



» This floor is electric. Max, sadly, is not electrocution-proof.



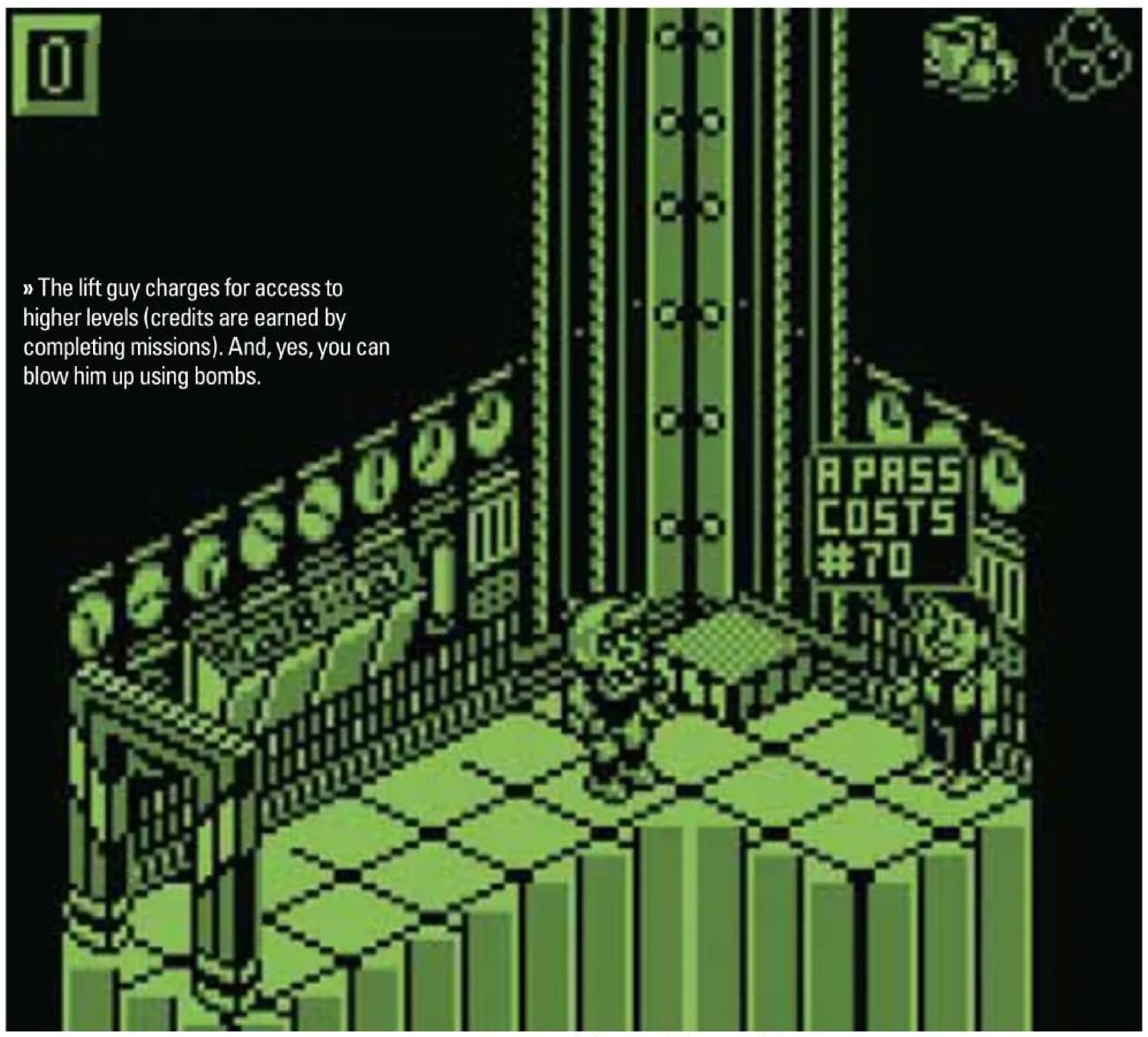
» Monster Max, about to showcase his anti-establishment leanings by, um, blowing up some bald guy with a bomb.

BUGGED OUT

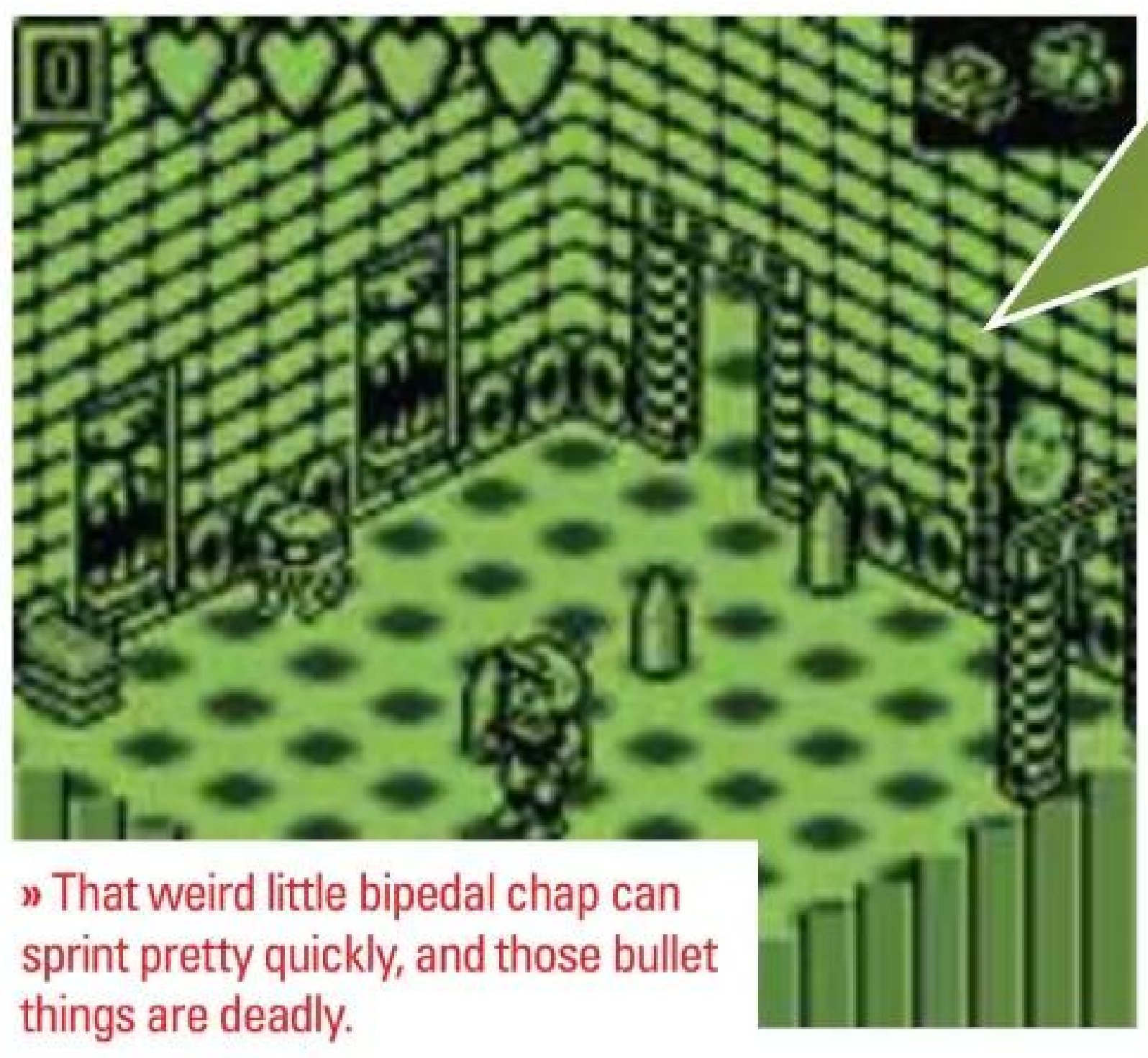
The missed bug that led to a six-hour game session

When researching this feature, we discovered a 20-part complete walkthrough of *Monster Max* (youtube.com/watch?v=YsFYVlmKIMk) and asked Jon if he'd seen it. "Well, I had to do something like that myself, to submit the game to Nintendo," he says, adding that was "a nightmare" because the kit used was actually a converted NES. "The D-pad is different and it's far easier to accidentally change direction. This is why the game offers two control options, purely so I could make that bloody video, even though the alternative controls were entirely pointless on the Game Boy".

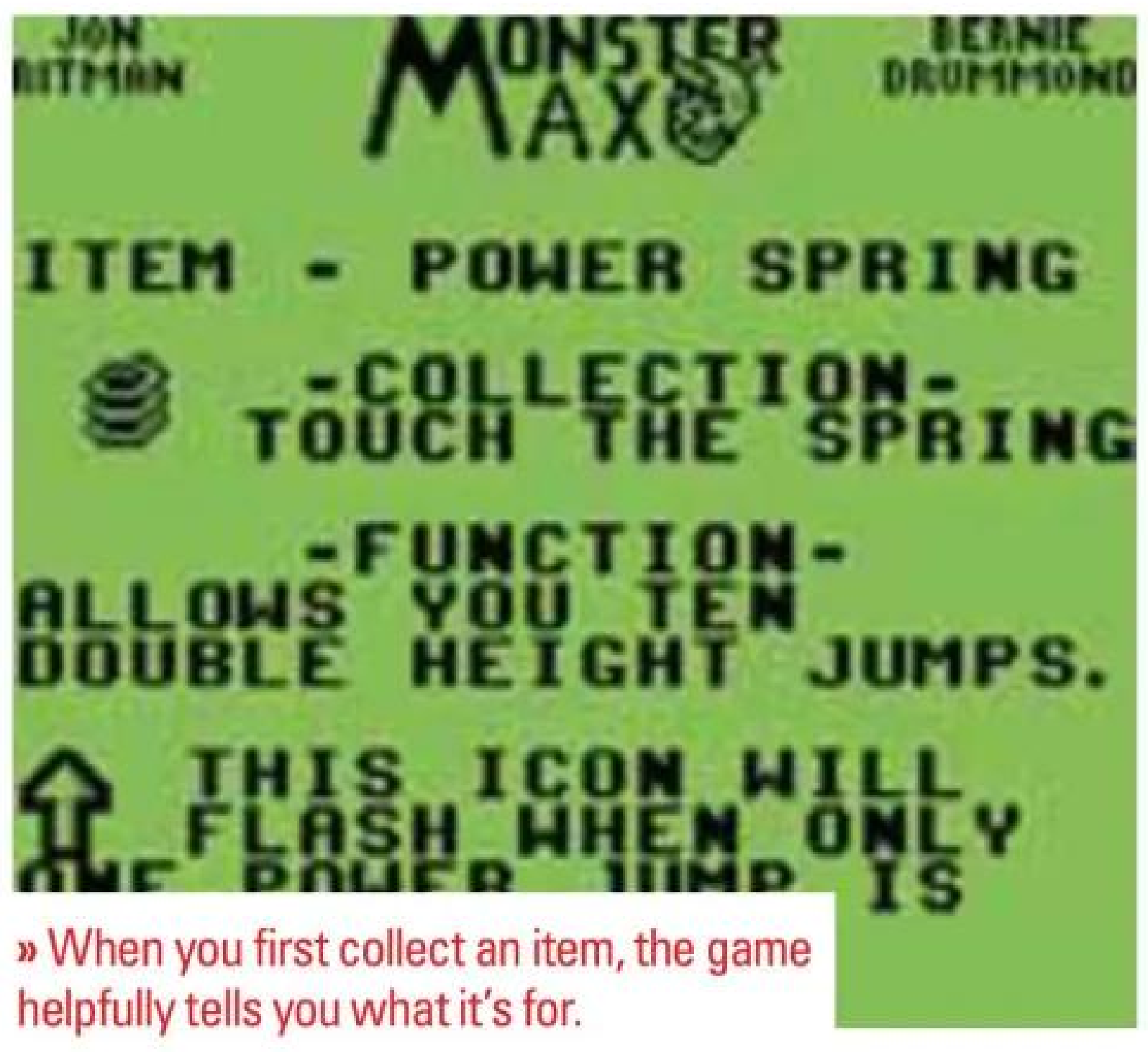
Still, he notes that the single-session playthrough that involved "six hours of play with my partner feeding me as I went," wasn't all for nothing, given that Nintendo found a bug – rare in a game by Jon, who always dealt with problems as they occurred, so he didn't build on top of them. "It was around the seventh level – for about three seconds, an icon flashed that shouldn't have. It was one of those bugs that when you find it, you wonder how it could ever have worked. But that was the only bug Nintendo found." Jon's reward: "It of course meant I had to fix it and then record another six-hour *Monster Max* session!"



» The lift guy charges for access to higher levels (credits are earned by completing missions). And, yes, you can blow him up using bombs.



» That weird little bipedal chap can sprint pretty quickly, and those bullet things are deadly.



JON RITMAN MONSTER MAX BERNIE DRUMMOND

ITEM - POWER SPRING

-COLLECTION-
TOUCH THE SPRING

-FUNCTION-
ALLOWS YOU TEN
DOUBLE HEIGHT JUMPS.

THIS ICON WILL
FLASH WHEN ONLY
ONE POWER JUMP IS

» When you first collect an item, the game helpfully tells you what it's for.

and earned back during play, whereupon they remained permanent. With *Monster Max*, he thought it would be interesting to force you to regularly let go of said abilities (jumping; ducking; a bag for collecting items; and many more) restricting the number you could use at once: "Two went nicely with the two main buttons on the Game Boy, although it did complicate the design. It was hard work ensuring you could always access the right tool, and to not create an arrangement of rooms where you'd accidentally put a tool down in the wrong position and not be able to get back to it. I had to be extremely careful with that, but I don't think I made any errors in the end."

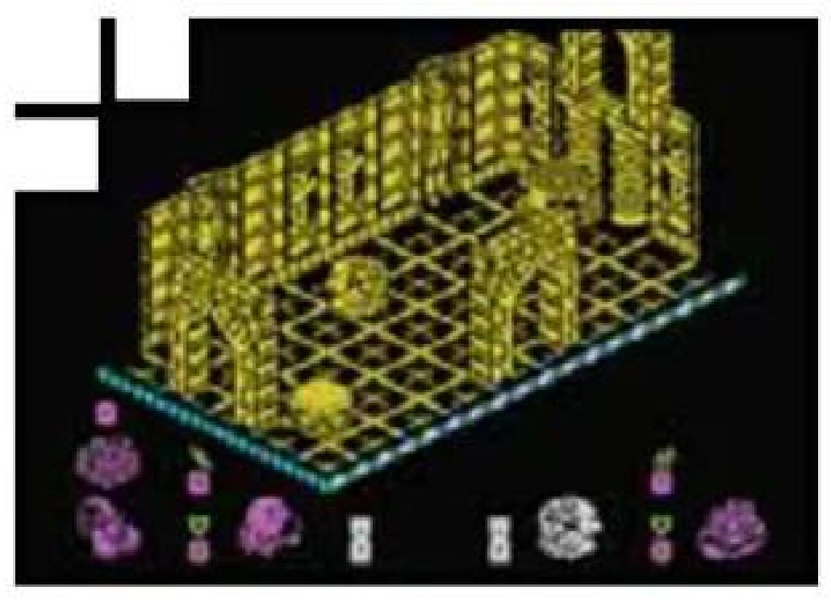
In terms of the game's theme, Bernie recalls the character of *Monster Max* was a case of the right place at the right time: "Jon and I hadn't worked together for a couple of years, and I'd reverted back to the highly colourful 'pen to paper' artwork I was used to. When Jon phoned and said we were going to make a game for the Game Boy, the guitar-playing half-skeleton/half-reptile Max was the latest creation I had to hand, although the small screen size meant the art was slightly compromised by the need to keep the visual clarity we were known for."

Otherwise, Bernie was again given the freedom to run riot – as he puts it, "drawing whatever looked good, with Jon then creating a narrative out of the images I gave him". Despite the size of the game, there was very little planning, with the pair pretty much making things up as they went along. "We'd have certain sizes of objects that we'd give nicknames to, such as 'sweets' and 'blocks', and I'd ask Bernie for 'five more sweets', he'd send ten, I'd chuck five away and see what was left," remembers Jon. "If they didn't work, I'd ask for more. Or sometimes Bernie would just send loads of stuff I'd think was brilliant and didn't know what to cut out." He notes the pair once more gained a reputation for having bizarre imaginations, primarily because objects were out of scale: "People said it was bizarre, but I just thought it was fun and we got better pictures in our games. There's a teapot in *Batman* that's half his size, but if it had been to scale, it would have been three pixels wide and looked like nothing at all. Instead, we got a beautiful teapot, and I carried on that line of thinking in *Monster Max*."

Despite the ad-hoc nature of *Monster Max*'s creation, Jon did carve out one very important rule to follow: "There was the idea there'd be three worlds on each level, but you'd only have to complete two to go up a level. It's always possible you'll create something someone can't do, and it's good to say there's an alternative." This all arose due to an assortment of people getting stuck fairly early on in *Batman*, and giving up despite having not experienced the majority of the game. "I was determined that would never happen again," confirms Jon. This revised structure in combination with a password system also dovetailed nicely with the idea of mobile play: "With the Game Boy, it might be something you'd use on the move, but *Head Over Heels* had to be completed in one go if you wanted to see the end. I liked the idea of a game being segmented into small chunks, where you could think 'I've done that bit' and could move on."

When we ask about specific memorable elements of *Monster Max,* though, it appears Jon himself has moved on – or at least his memory now has. "When I first started making games, I was always of the opinion one of the greatest tools I could have would be an anti-memory pill. It would have wiped my memory of a game, so I could play it like anyone else, and not someone who knew it inside out. I could then really hone it," he says. "Of course, that wasn't available, but I discovered by trial and error that if you wait for ten or 12 years, that all sort of happens by itself. So I did go back and get that experience with *Monster Max*, playing it as if it was someone else's game, and I thought it was quite fun. Unfortunately, that was about ten years ago, and so I've more or less forgotten it again!"

Jon does at least recall that what you saw on the screen was entirely what he planned to put there, and that there's no kind of 'director's cut' waiting in the wings, on some lost development rig in a dusty cupboard: "When I was making a world in *Monster Max*, I was always trying it out room-by-room, and if I didn't like how something felt, it would be out." In a sense, this was also the first of Jon's isometric titles that was extremely reliant on his own tastes, given that wider playtesting was significantly harder than it had been on the Spectrum. "Previously, I'd had the opportunity to

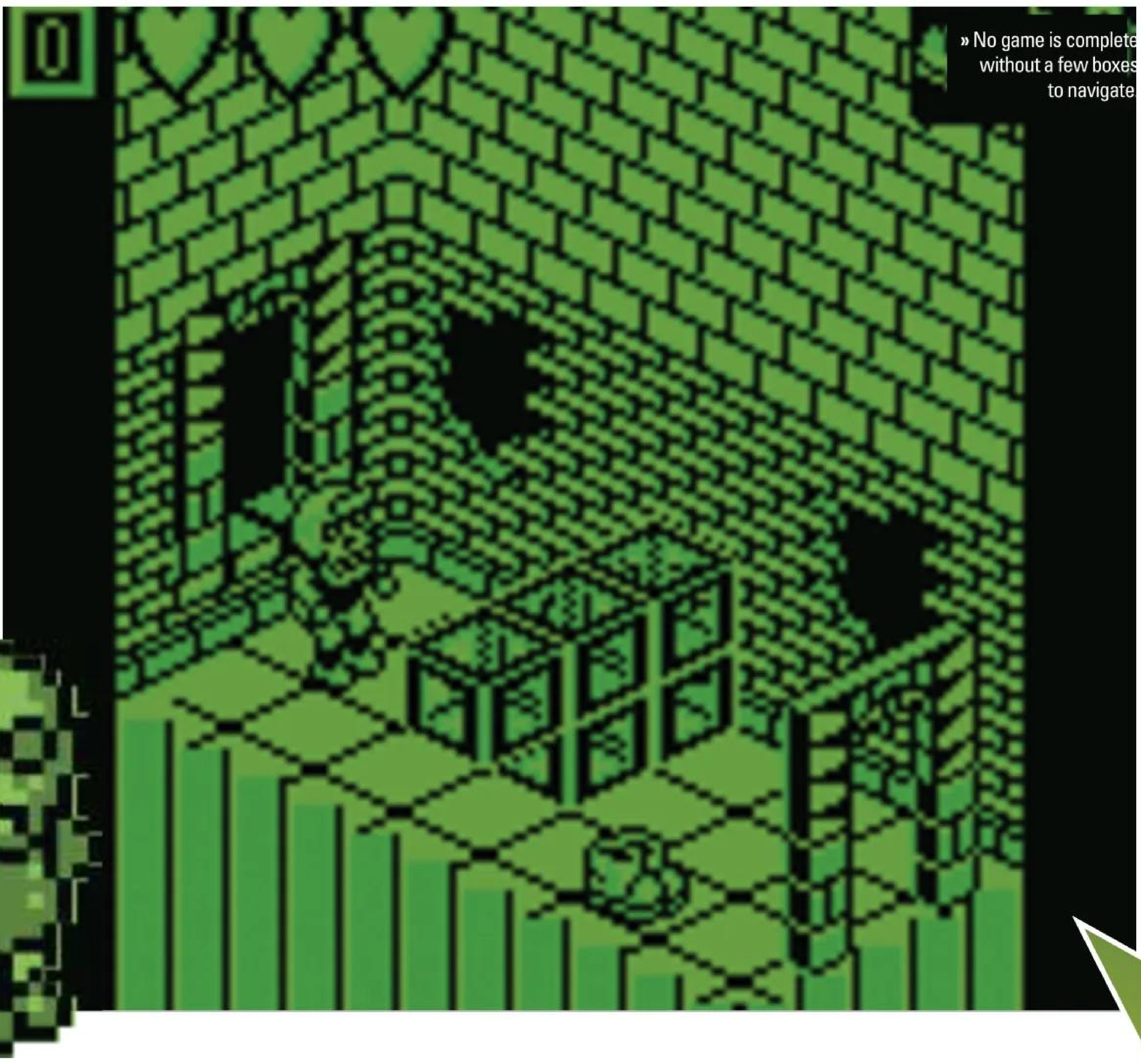


DEVELOPER HIGHLIGHTS

MATCH DAY
SYSTEM: VARIOUS
YEAR: 1984

BATMAN
SYSTEM: VARIOUS
YEAR: 1986

HEAD OVER HEELS **(PICTURED)**
SYSTEM: VARIOUS
YEAR: 1987



» No game is complete without a few boxes to navigate

MORE RITMAN

We select some of our personal favourites

NAMTIR RAIDERS

ZX81 (1982)

■ Like many early coders Jon's earliest game was based on the arcade games he had played. *Namtir Raiders* is an interesting take on the likes of *Space Invaders*. Oh, and if you're wondering where the name came from, it's just Ritman spelt backwards.

BEAR BOVVER

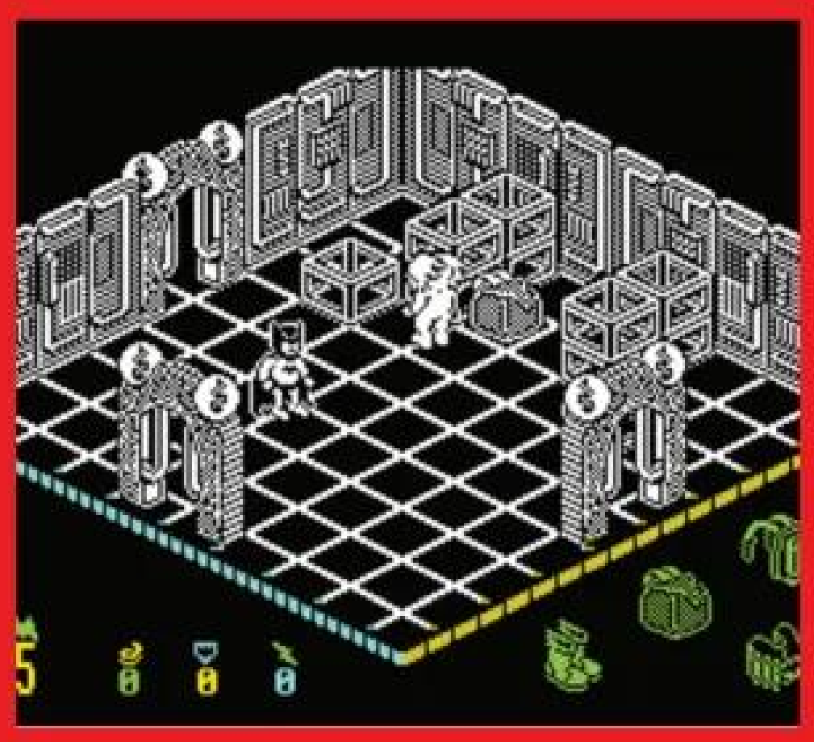
ZX SPECTRUM (1983)

■ Jon left his career at Radio Rentals so he could work on videogames full-time. The end result was this highly entertaining platform game for the Speccy that riffed on the gameplay of *Burger Time* after Jon had seen it running on the ColecoVision.

MATCH DAY

VARIOUS (1984)

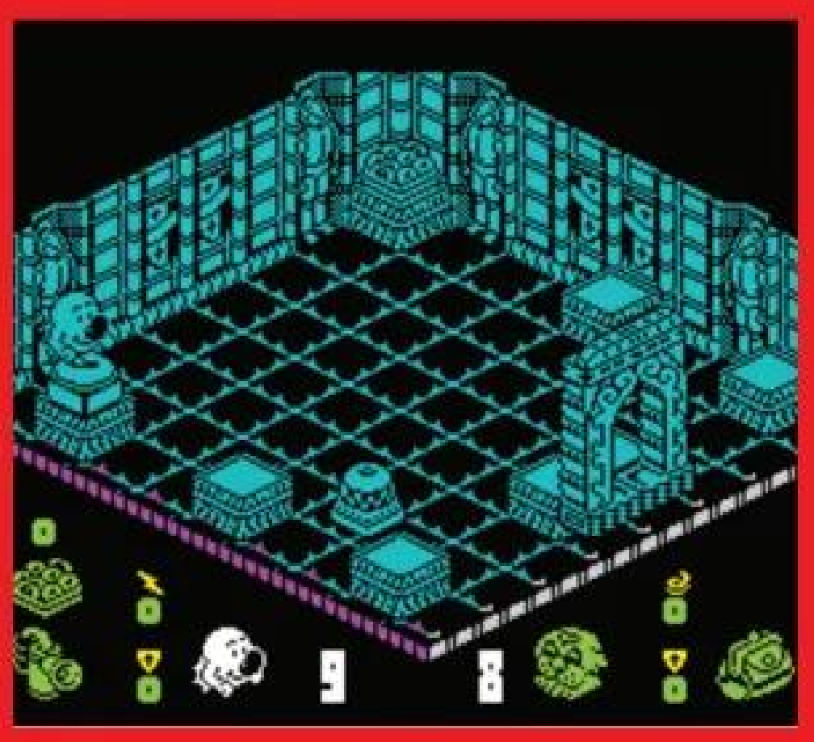
■ *Match Day* was a great football game, made all the more surprising once you realise that Jon himself wasn't a big fan of the sport. Fast-paced and with some neat gameplay mechanics, it led to a relationship with Ocean that lasted for several years.



BATMAN

VARIOUS (1986)

■ It's hard to imagine today, but a *Batman* game had been quite a risk for Ocean when it was released in 1985. It's a highly entertaining isometric adventure by Jon that marked the start of a collaboration with a friend of a friend called Bernie Drummond.



HEAD OVER HEELS

VARIOUS (1987)

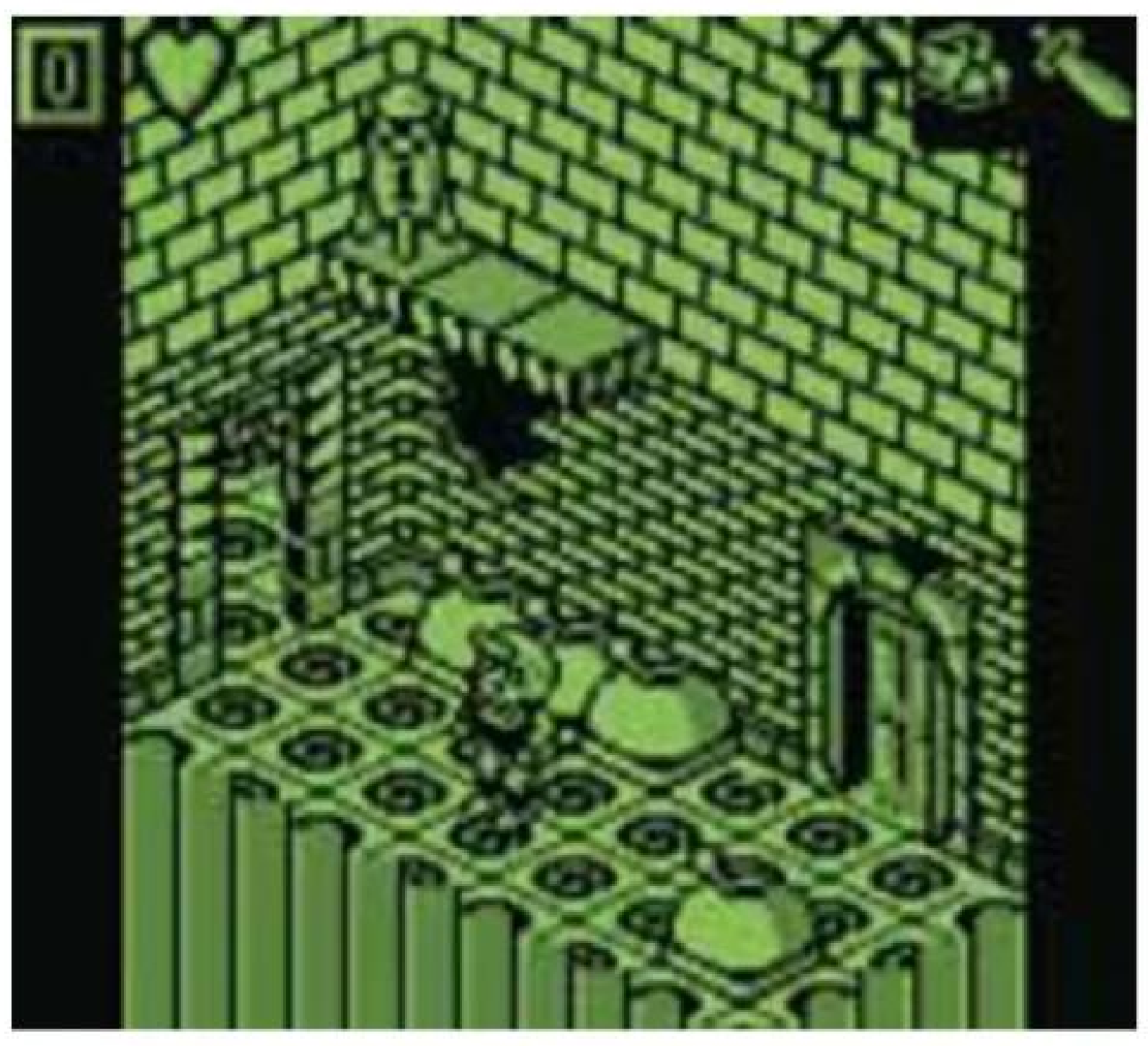
■ For many this remains Jon's greatest game. It's an absolutely gargantuan effort that builds massively on the isometric groundwork of *Batman* and introduces even more devious puzzles. It also created one of gaming's most lovable duos in the process.

MATCH DAY II

VARIOUS (1987)

■ Everything about Jon's football sequel was bigger and better than its 1984 predecessor. Bernie's sprite work is wonderful, while the addition of the Kickometer and Diamond Deflection System made the core gameplay even more enjoyable.

» Flick the switches; get the missile. Here's hoping it doesn't detonate…



» In other words: "Blow this guy up and you'll get some lovely money."

REWARD # 45

FACES CRUEL
JEER AND TWIST
ON MAD EWJEL
ERASE ALCHEMIST

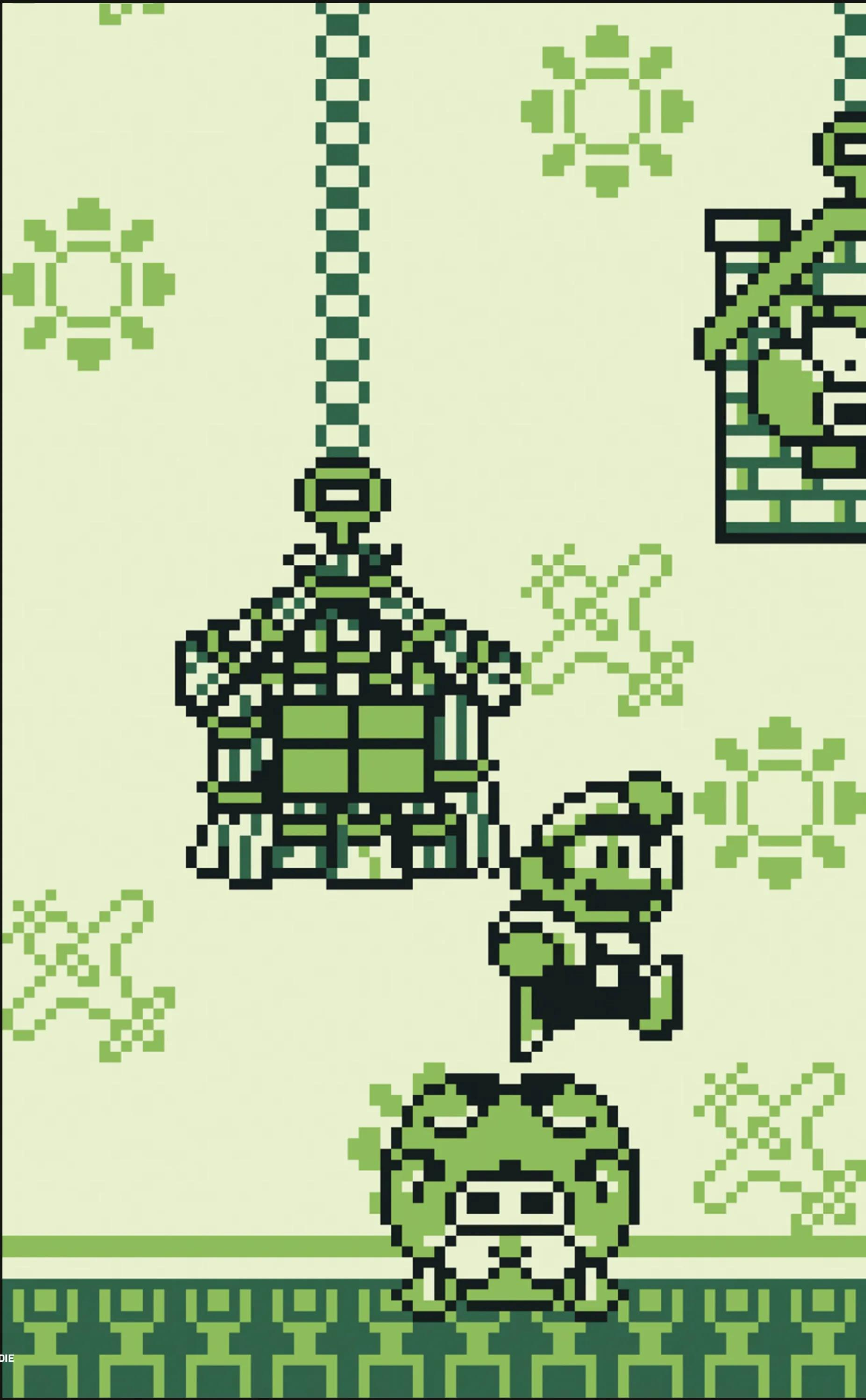
♡♡♡♡ # 3

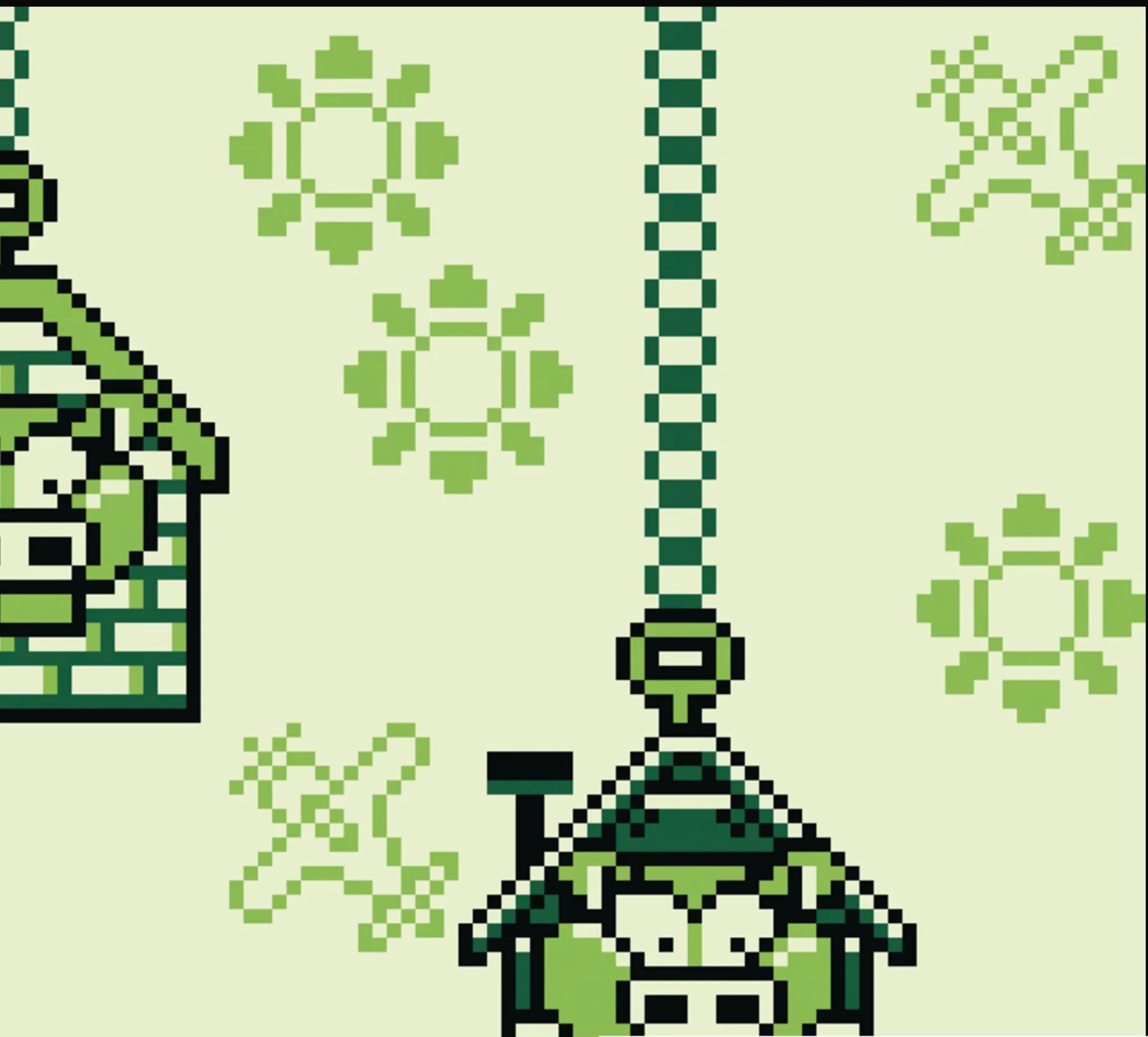
watch people play *Batman* and *Head Over Heels*. I found it very valuable to look over their shoulders as they played, and quite a few rooms were changed through how people were reacting and the problems they were having," he explains. "In some cases, it was down to how rooms were laid out. Because you don't have perspective, isometric can be confusing, and so I'd perhaps turn a room around and have it at a different angle. With the tiny Game Boy screen, I could no longer rope in friends, and so all the testing and changes were down to me, trying to put myself in the mindset of someone else. I hope I got it right, and it felt pretty good when I played it ten years later. Although I guess that procedure of waiting ten years to forget a game so that you can test it isn't very useful for a current release!"

Unfortunately, a weirdly lengthy delay (if not quite a decade) also happened with *Monster Max*'s actual release. It reviewed well, with 94 per cent in *GB Action* and a whopping 96 per cent in *Super Gamer*, which declared it the "best Game Boy title ever", but the game was held back for almost a year, heavily impacting on sales. "I've got no idea at all what happened," says Jon, sadly. "I'd been working with one of the Titus bosses – a very bright man – on all of the language stuff, because he spoke about six and could program. Everything seemed to be going ahead fine, with no trouble. And then after the game was complete, I had no more contact with him, and nothing happened for ages. It was strange after such great reviews."

Intriguingly, Jon reveals *Monster Max* could have found its way to market in a very different form: "I had the opportunity – and I would have taken it, had I known Titus was going to hang on to the game for a year – to change the graphics, drop the *Monster Max* character, use one of the *Mario* stable, and have Nintendo publish it." Jon says he doesn't know for sure what changes to the other graphics Nintendo would have demanded, but he imagines it would probably have been a lot, and that was what put him off at the time: "You get to that stage where you think 'we've finished it now', and any major changes would just feel like starting again. I know Shigeru Miyamoto played the game, and that there are aspects of things that he didn't like. I suspect whatever changes he would have wanted would have required rejigging all of the puzzles."

It wasn't to be, but Jon says he's still proud of the game itself and the following it retains today, if understandably disappointed its commercial success didn't match the critical acclaim. And Bernie, too, is delighted people are still talking about *Monster Max*: "It's good to hear classic games still have appeal. It's a lot of work making a game, and it sometimes seems disproportionate to the time someone might spend playing. But as an artist, you are in the business of creating a perfect moment. Layers of detail are designed to happen simultaneously, and knowing that people have enjoyed the results of our work makes it all worthwhile." *





Super Mario Land 2: Six Golden Coins

SORRY JOOLS...

» RETROREVIVAL

» GAME BOY » 1992 » NINTENDO R&D 1

What was your first gig? A lot of my friends say Blink 182, S Club 7, or even Busted. I'm a little conflicted on my answer; I usually say Iron Maiden (I was a 14-year-old metalhead), but it's technically Jools Holland circa 1997, though I sure as hell wasn't paying attention, I was hiding in a tent playing *Super Mario Land 2*, much to my parents' bewilderment.

It was a good show, don't get me wrong – the saxophone player climbed up into the stage's rigging for his solo… I at least caught that bit – it's just playing *Mario Land 2* was the better experience of that night. It's a testament to Nintendo's development team that it managed to condense the Mario experience down to a tiny green screen, and not lose a single bit of lustre.

It's a little cut-down compared to, say, *Super Mario Bros 3*, but I actually think the Game Boy *Mario Land* games are better. There's no faff like holding onto a power-up or anything like that, what you see is what you get. The world design is fantastic, too, mostly thanks to its non-linearity. You can tackle whatever world you want to in any order, and if you run into a level that's too hard, you can just back out and try another world.

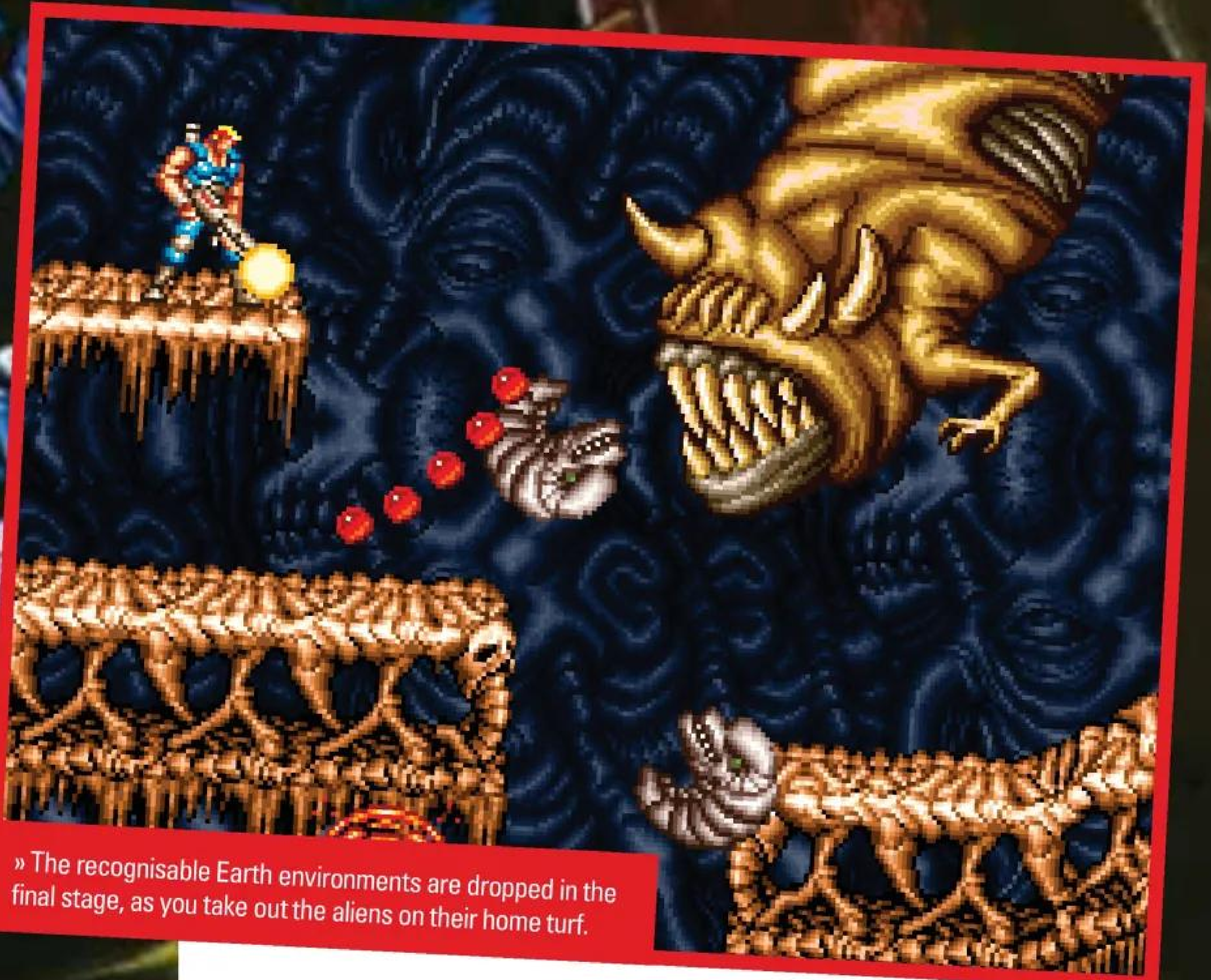
The levels look great, too. My favourites are from Mario Zone, which culminates in a final Lego-themed stage and a Three Little Pigs boss fight – why they're hanging around in a clockwork Mario's head is anyone's guess.

So if you haven't played *Super Mario Land 2*, you're missing a trick. Grab a Game Boy and lose yourself. Just don't crack it out at your next concert; you'll end up missing the entire thing. *

ULTIMATE GUIDE:

CONTRA III THE ALIEN WARS

THE CONTRA SERIES HAD ALWAYS OFFERED A FUN WAY TO CAUSE SOME CARNAGE, BUT THE ARRIVAL OF NINTENDO'S SUPER-POWERED 16-BIT SNES ENABLED KONAMI TO TAKE IT TO THE NEXT LEVEL. WE LOOK BACK AT ONE OF GAMING'S GREATEST RUN-AND-GUNS



» The recognisable Earth environments are dropped in the final stage, as you take out the aliens on their home turf.

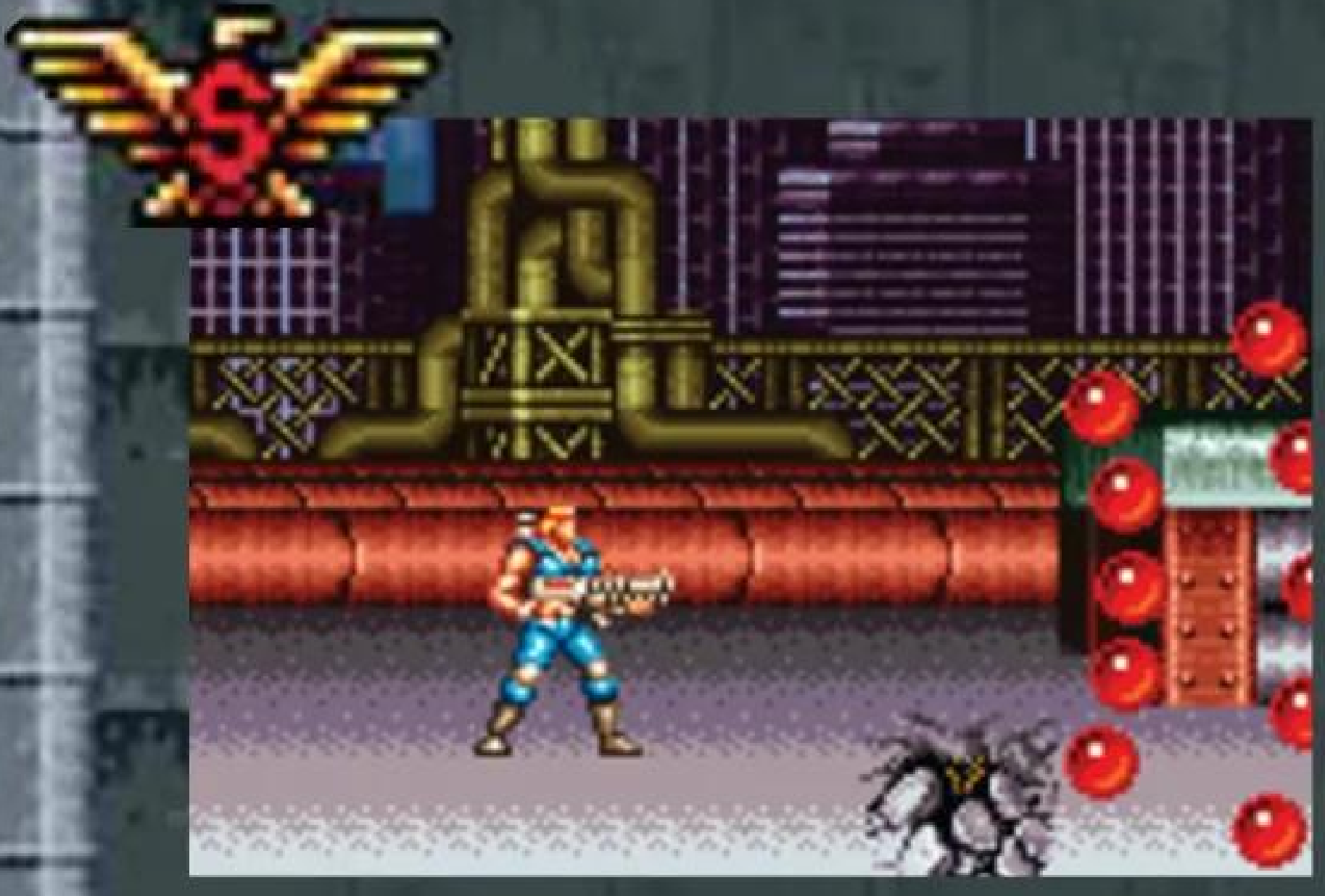
We all know that it's possible to extract amazing performance from a dated gaming platform – with clever programming and perhaps a little hardware help, minor miracles are possible. But sometimes you just have to accept that more power *is* the answer, as a new hardware platform can bring wholly new possibilities to a game or genre, whether that's with new graphical techniques or through sheer computational power. When *Contra III: The Alien Wars* hit the SNES in 1992, there was no doubt that this was one of those instances, as the game featured impressive setpieces and high-intensity action that just wouldn't have been possible on older machines.

Contra was converted to a variety of platforms following its arcade debut and found success on the NES, but Nintendo's 8-bit platform wasn't especially well suited to the game's action. Konami's coders had to work to minimise sprite flickering in both *Contra* and *Super C,* and slowdown ultimately blighted *Contra Force.* But with the greater power of the SNES, *Contra III* was able to increase the carnage. Sprites stayed intact as bullets flew around the screen and enemies swarmed the stage, and the pace remained pretty consistent, save for during crazy special effects such as the transparent bomb blasts. Part of that is down to improved hardware, but it's important to note the stellar work done by programmers Mitsuru Yaida and Hideyuki Suginami in making efficient use of the SNES CPU. Their skills enabled the sorts of arcing flames and crazy multi-sprite bosses that made *Contra III* look more like an arcade game than anything else.

Importantly, none of the signature features of previous games were sacrificed in order ▶

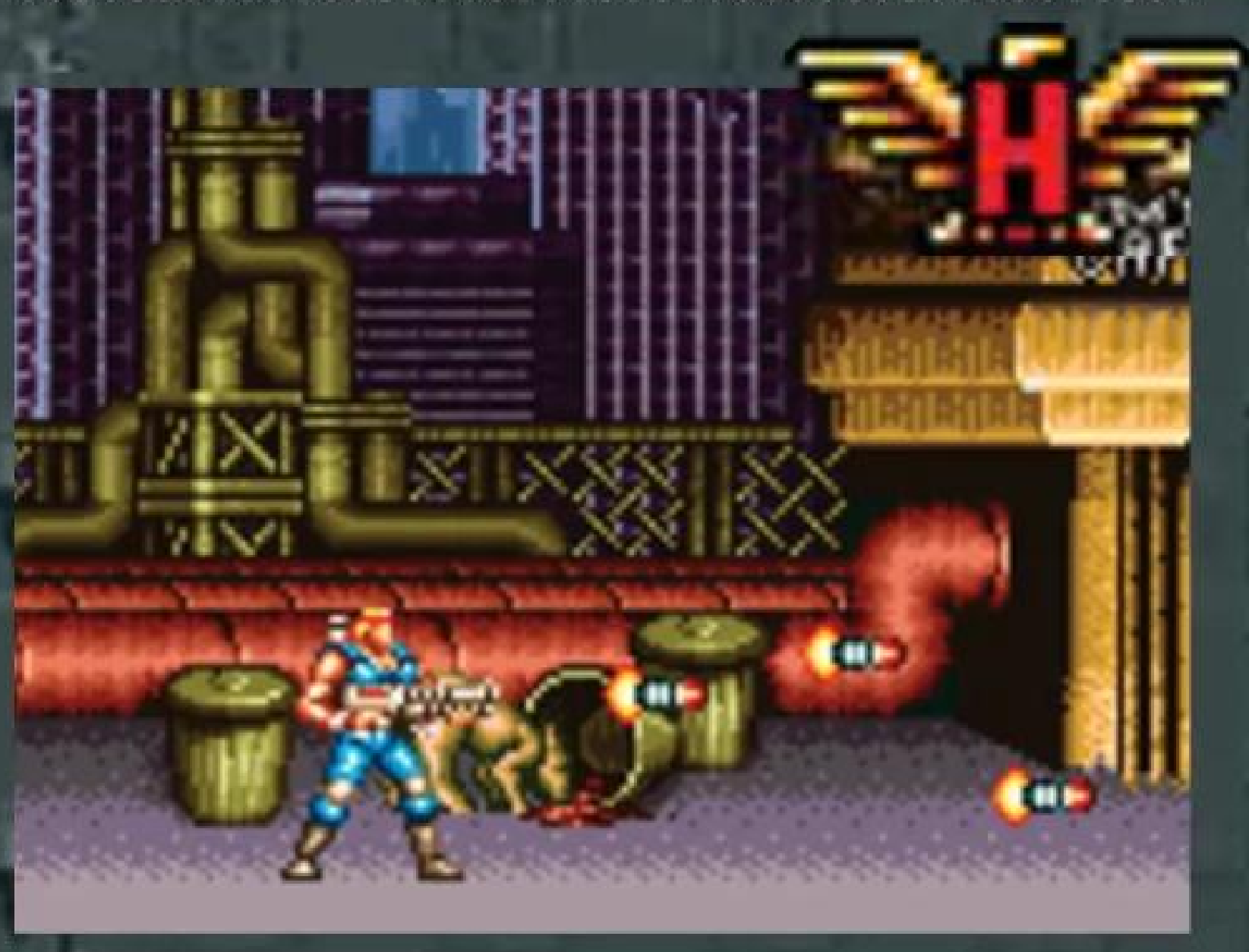
AWESOME ARSENAL

You'll need some help to beat back the alien hoards, and these weapons and power-ups prove to be just what you need



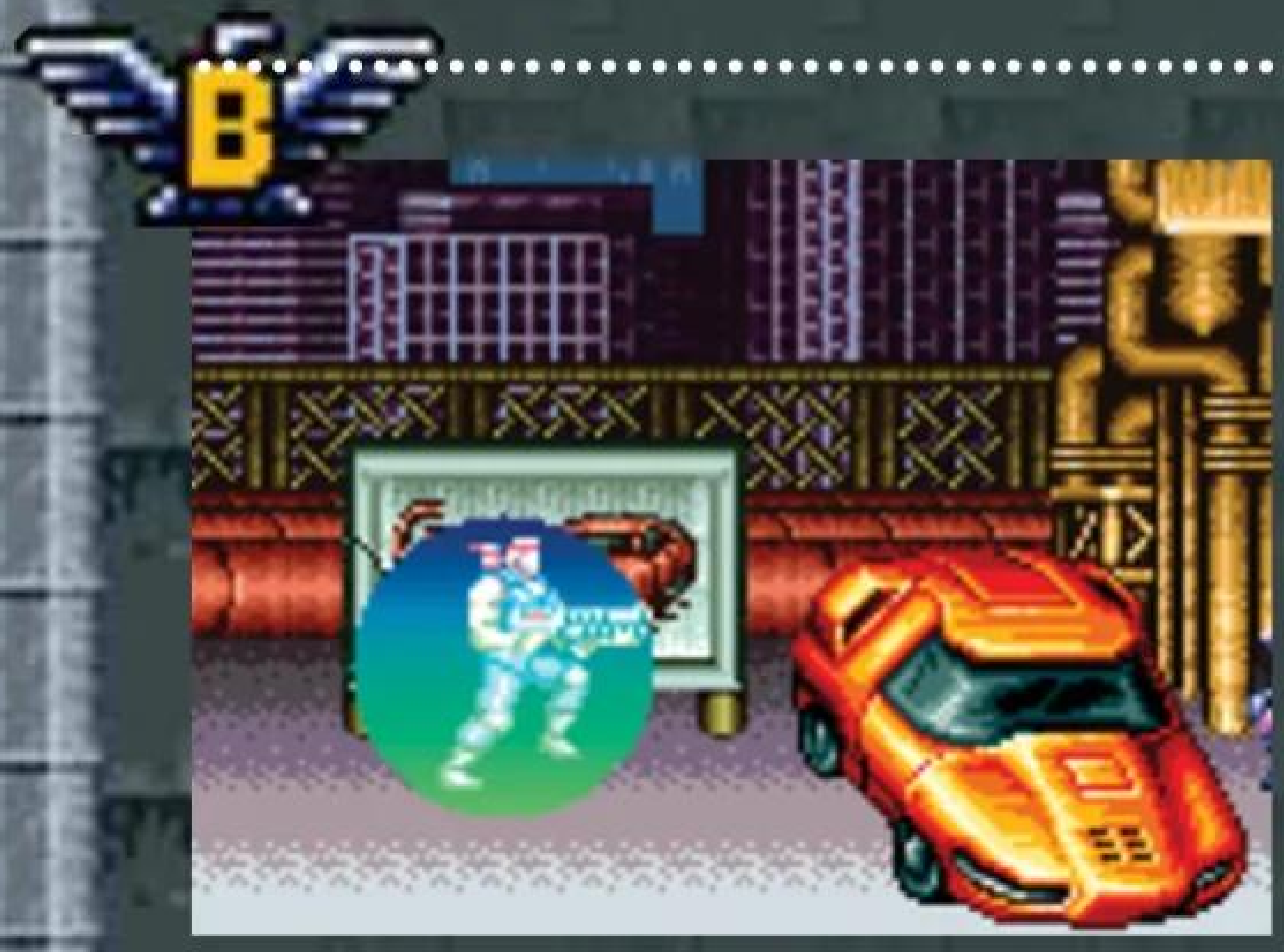
SPREAD GUN

■ The classic is back, and we'll always welcome it. Why limit yourself to a single line of destructive fire when you can spread the damage over a wider area?



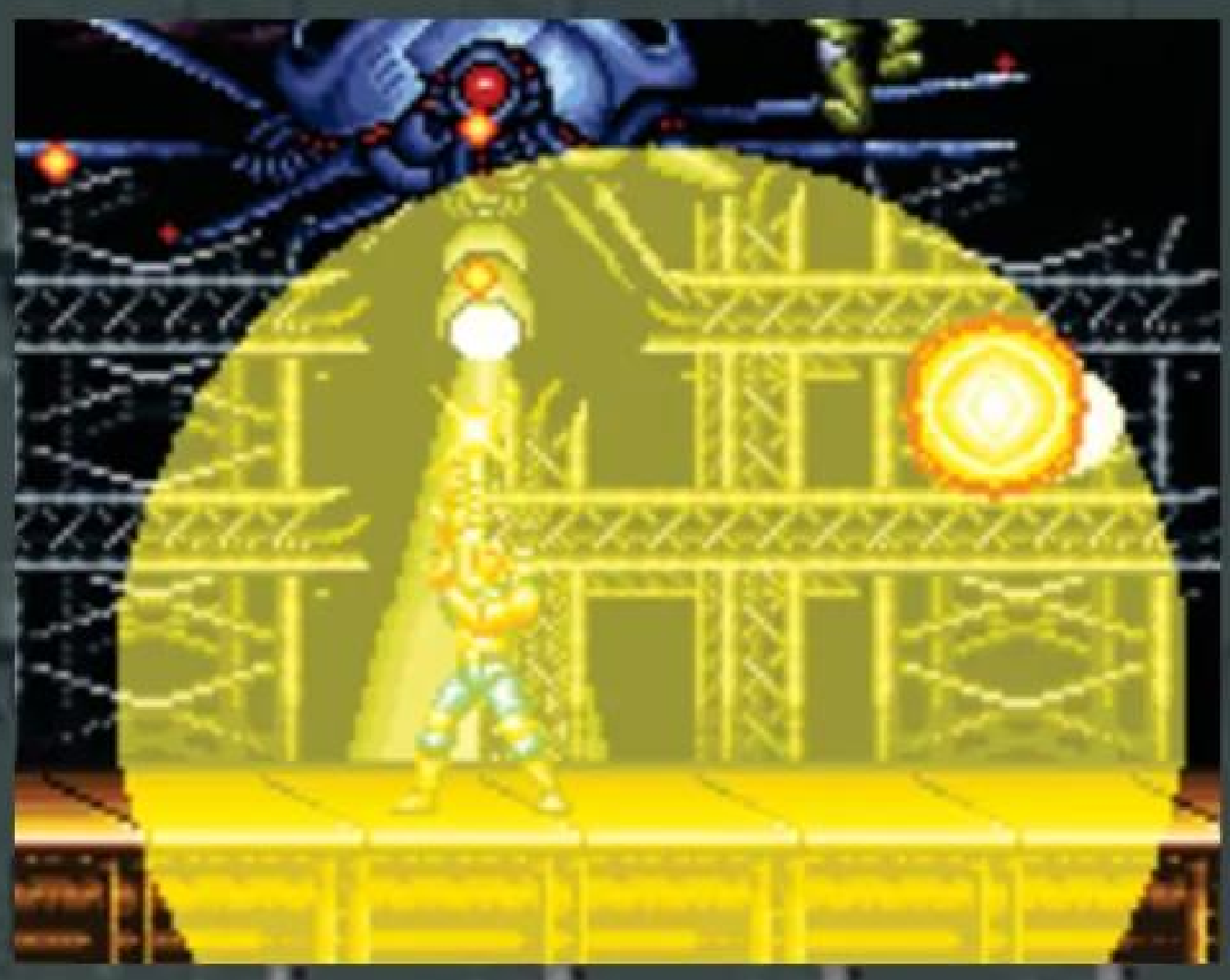
HOMING GUN

■ Accurate aiming is for chumps and suckers, as anyone who has spent some time with these homing missiles will tell you. It's great for novice players.



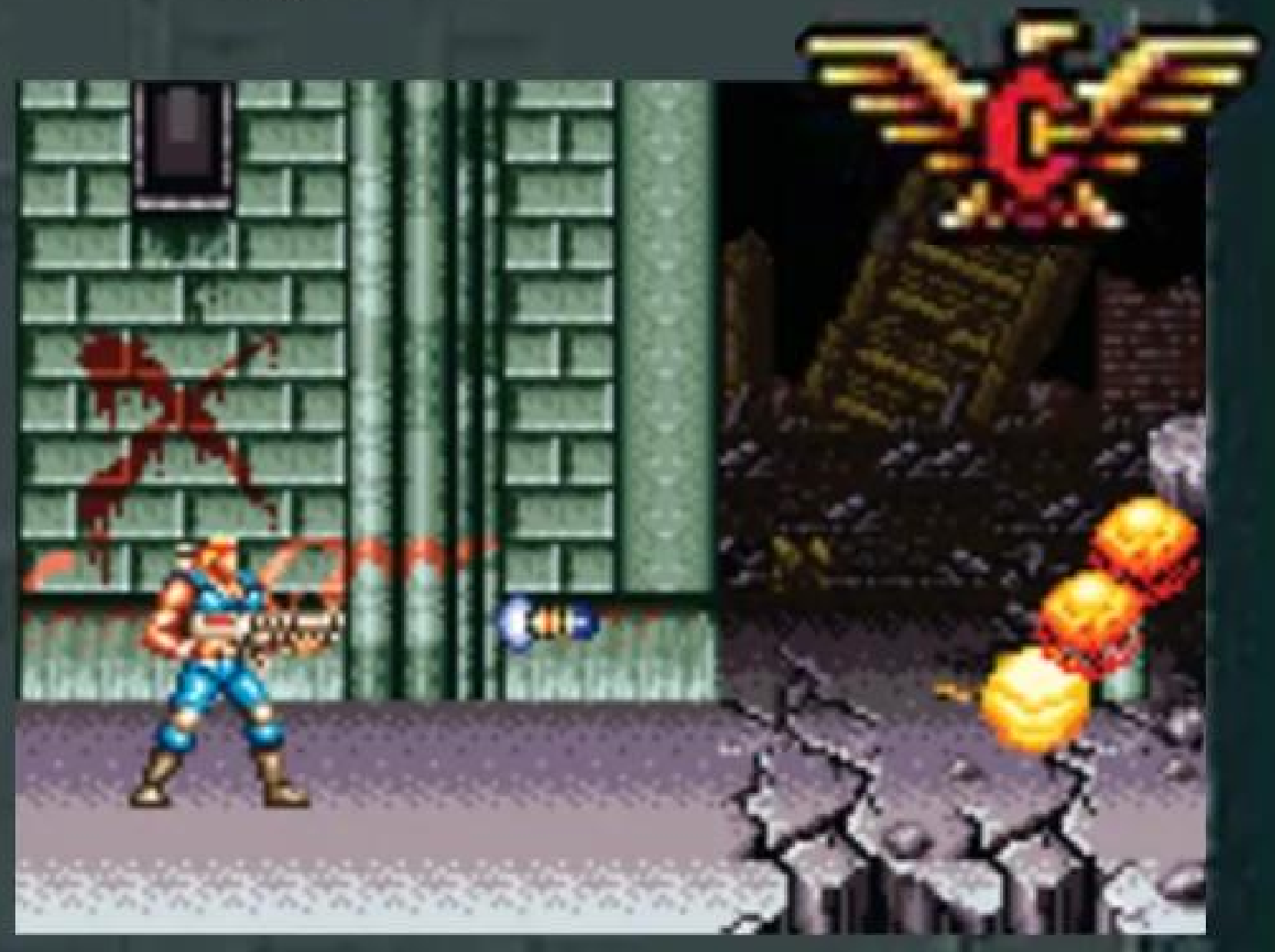
BARRIER

■ This handy multihued shield allows you to run around at leisure, unimpeded by enemy gunfire. It turns red when it's on the verge of expiring, so pay attention!



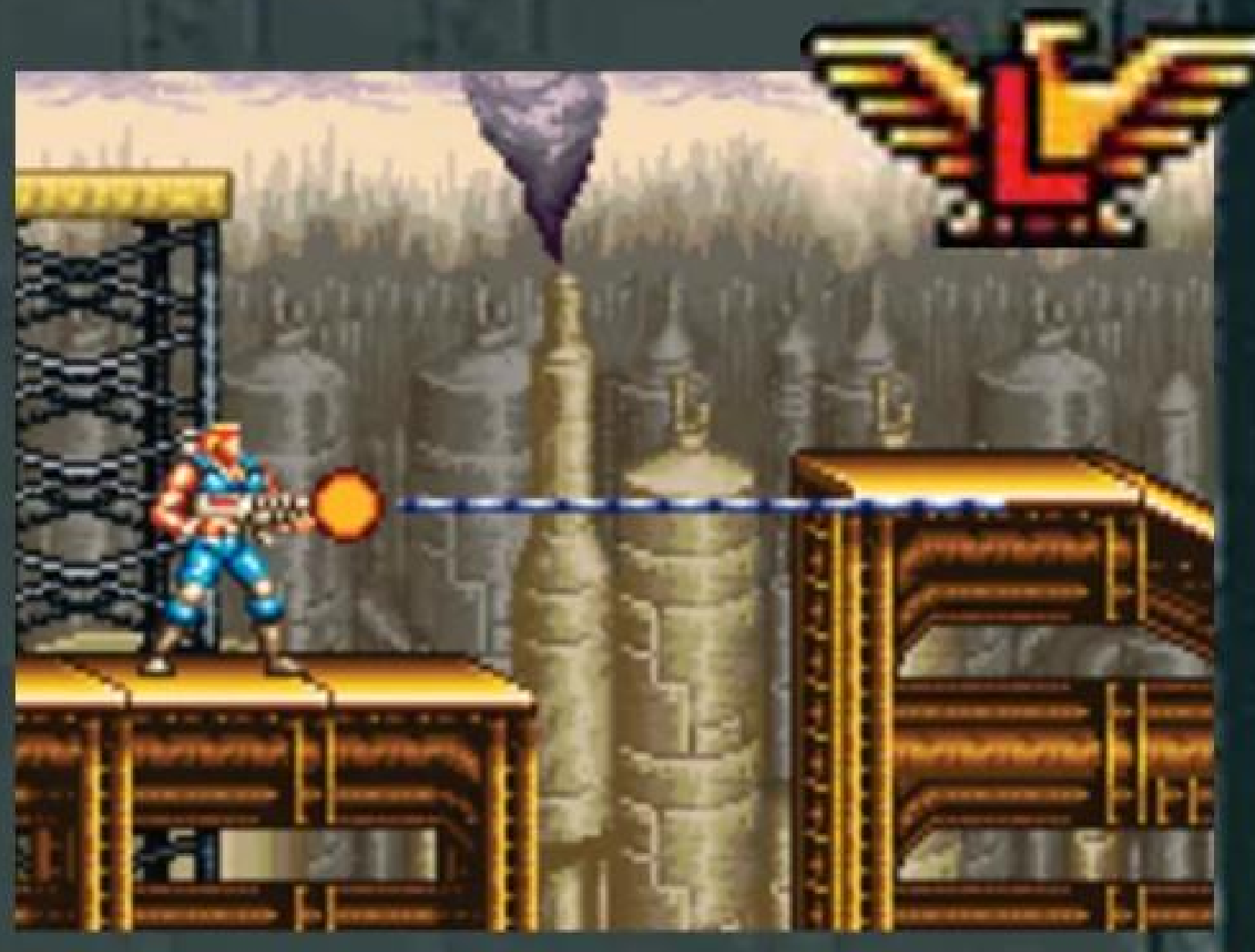
CRUSH GUN

■ This weapon fires powerful blasts that leave lingering explosions, causing extra damage. The major disadvantage is the short range of fire.



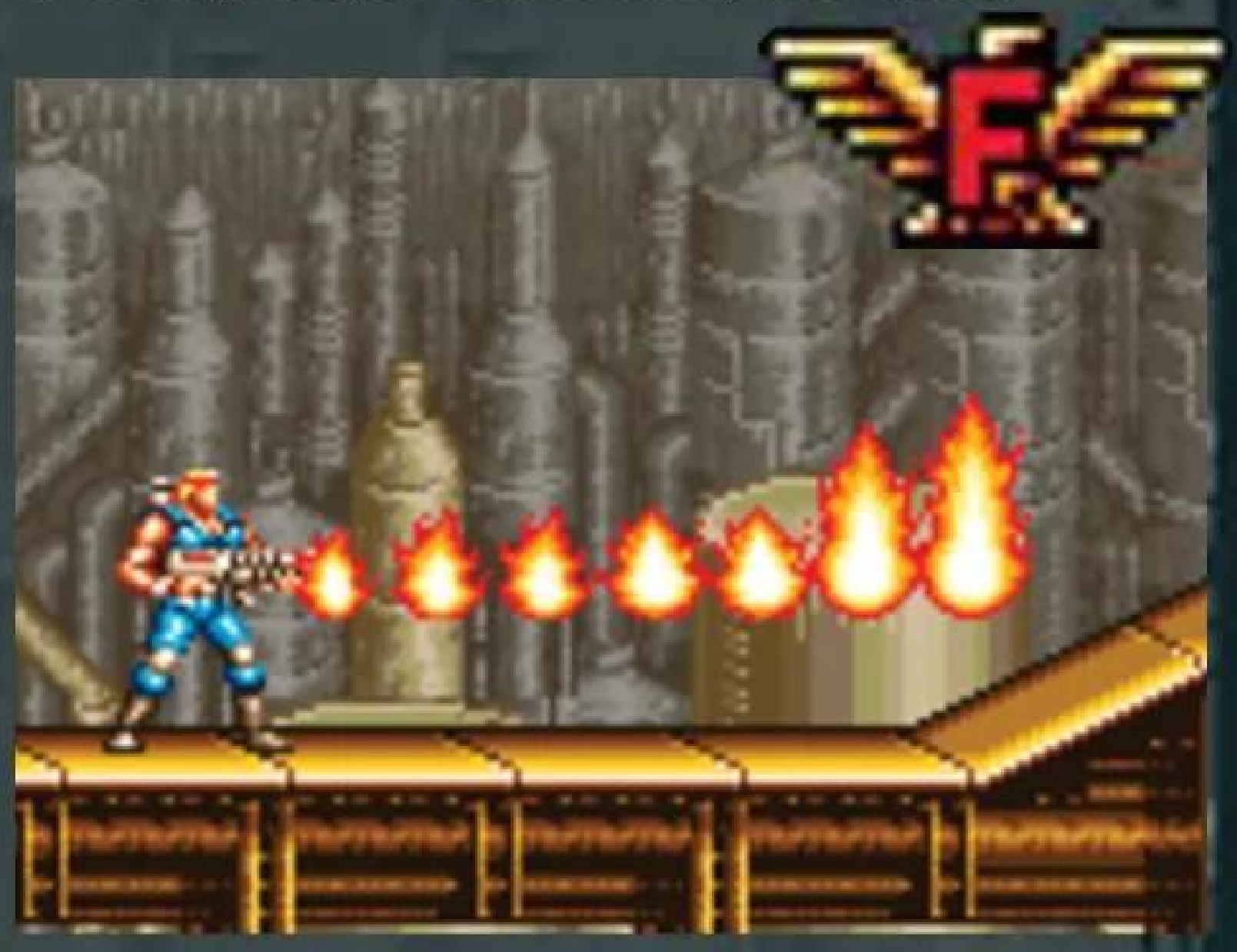
LASER GUN

■ While this weapon only fires in a straight line, much like the standard machine gun, it's extremely powerful and makes short work of tough bosses.



FLAMETHROWER

■ The flamethrower suffers from a limited range, but it destroys some enemy projectiles and whips around as you turn, covering angles other weapons don't.



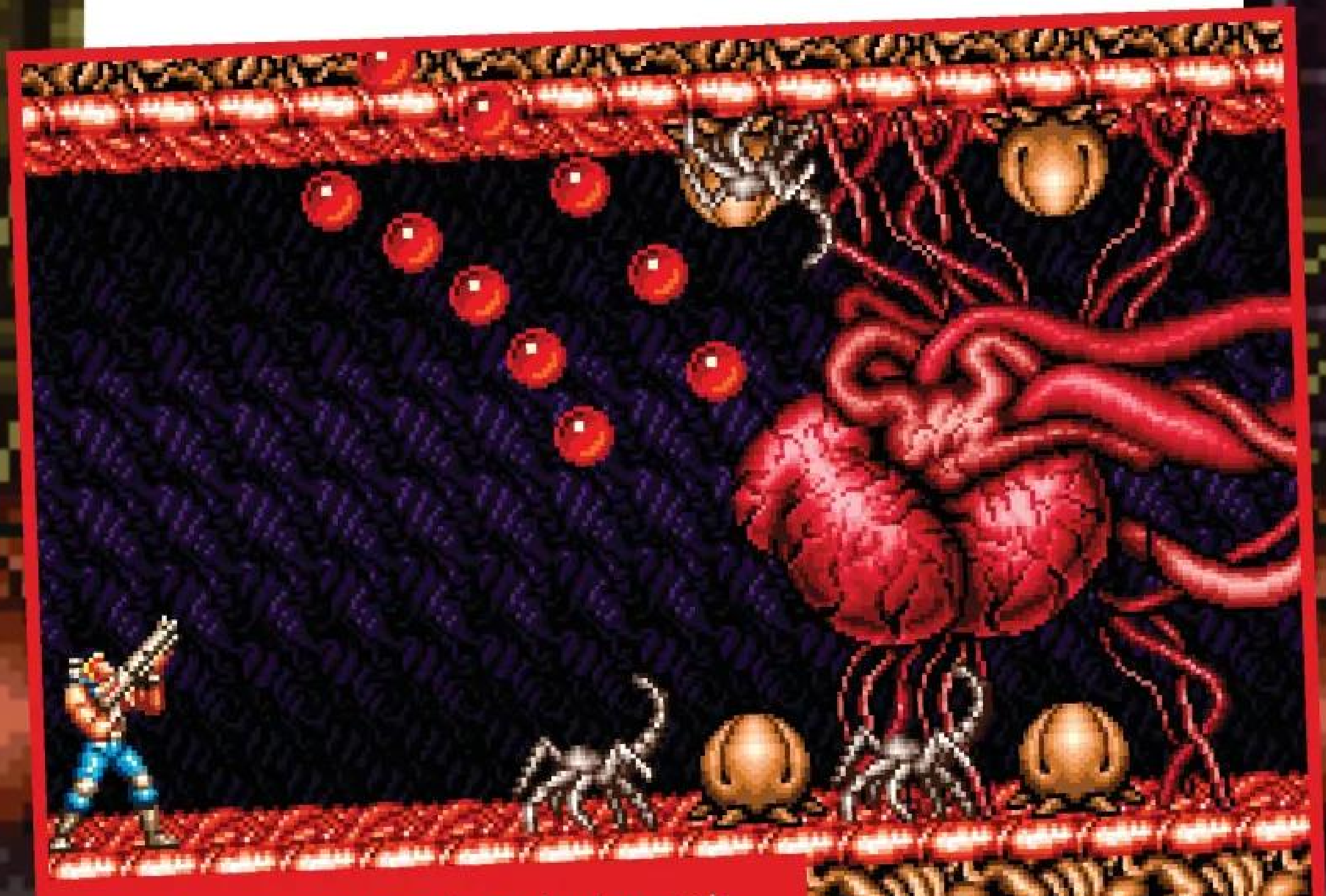
BOMB

■ You start each life with one of these, but picking up more gives you extra opportunities to clear up a screen full of enemies at the touch of a button.

to achieve this excellence. A full selection of weapons was available, with the time-tested laser and spread guns joined by new additions like the homing gun, and co-op play was supported throughout the game. But what's most impressive is that the technical leap forward is matched by the inventive level design. The first stage is familiar *Contra* territory, a side-scrolling run through a decaying city, complete with a tank to ride and perilous fire traps. But the second stage rams home how all of the technical improvements were in service of the game design, as the overhead stage is now a fully rotating Mode 7 affair, enabling a nonlinear maze structure in which you have to seek out and destroy set targets before you can move on to the boss. During a co-op game, both players can even explore the overhead stage independently as the game employs a split-screen setup.

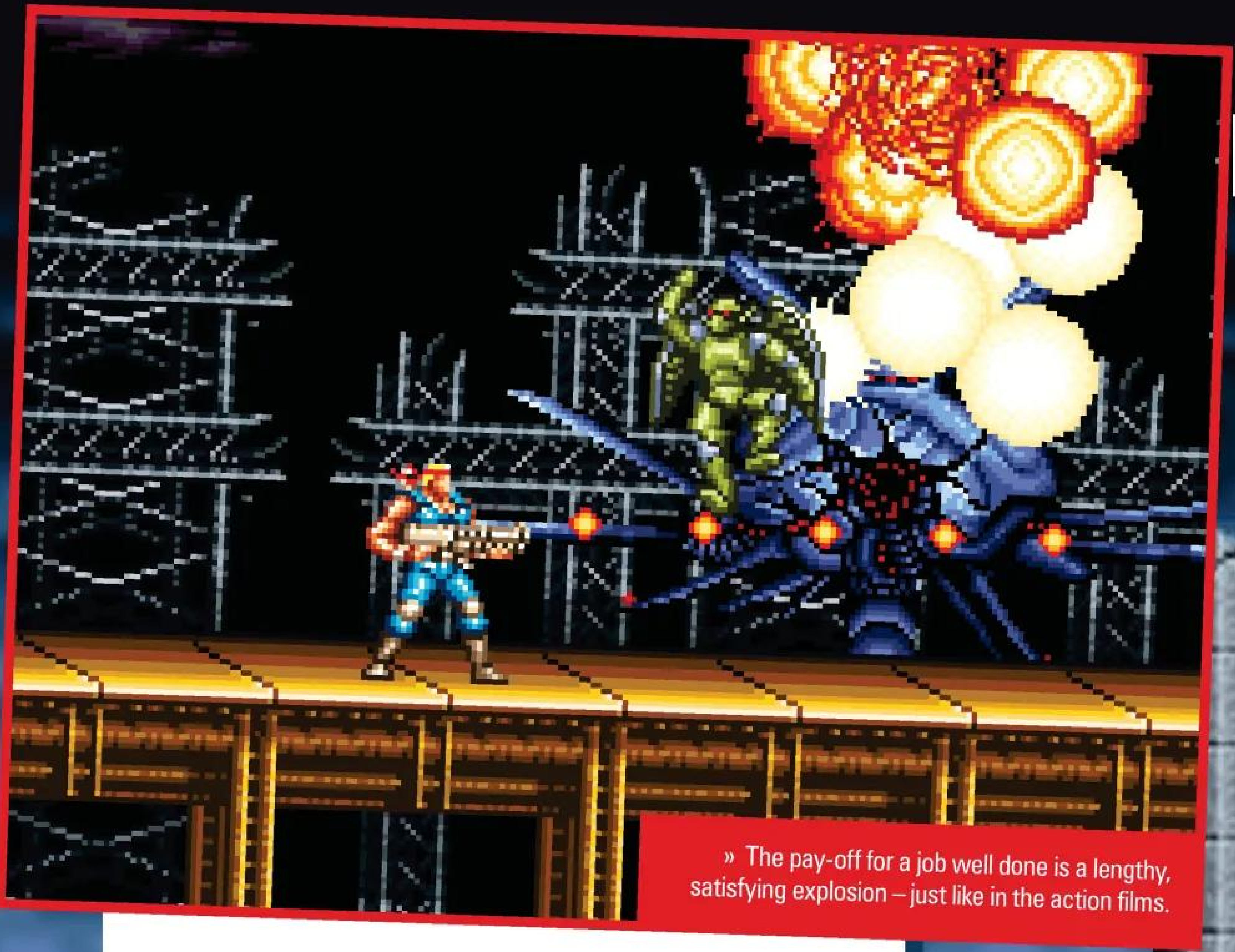
As you go on, the game never lets up with the inventive scenarios – the third stage sees you fighting minibosses while hanging from rails and walls, and the fourth starts with a high-speed jet bike chase before you take to the air. The fifth stage returns to the overhead view and the final stage takes you inside the alien lair, with a boss rush to conclude the game. And *Contra III*'s most impressive scenes were reserved for the boss fights, ranging from a huge skeletal robot crashing through the wall to a dangerous aerial battle where your character is hanging from moving missiles. We're still impressed by the second stage boss, a spider-like flying robot that manages to create the illusion of two rotating graphics layers using sprites with 32 predrawn rotations.

All of this was conveyed with dramatic audiovisual impact, as the SNES really allowed the team to go to town on making *Contra III*



» For the most part, the final stage is a boss rush – there are few regular enemies to be found here.

MAN-FACED MUTT

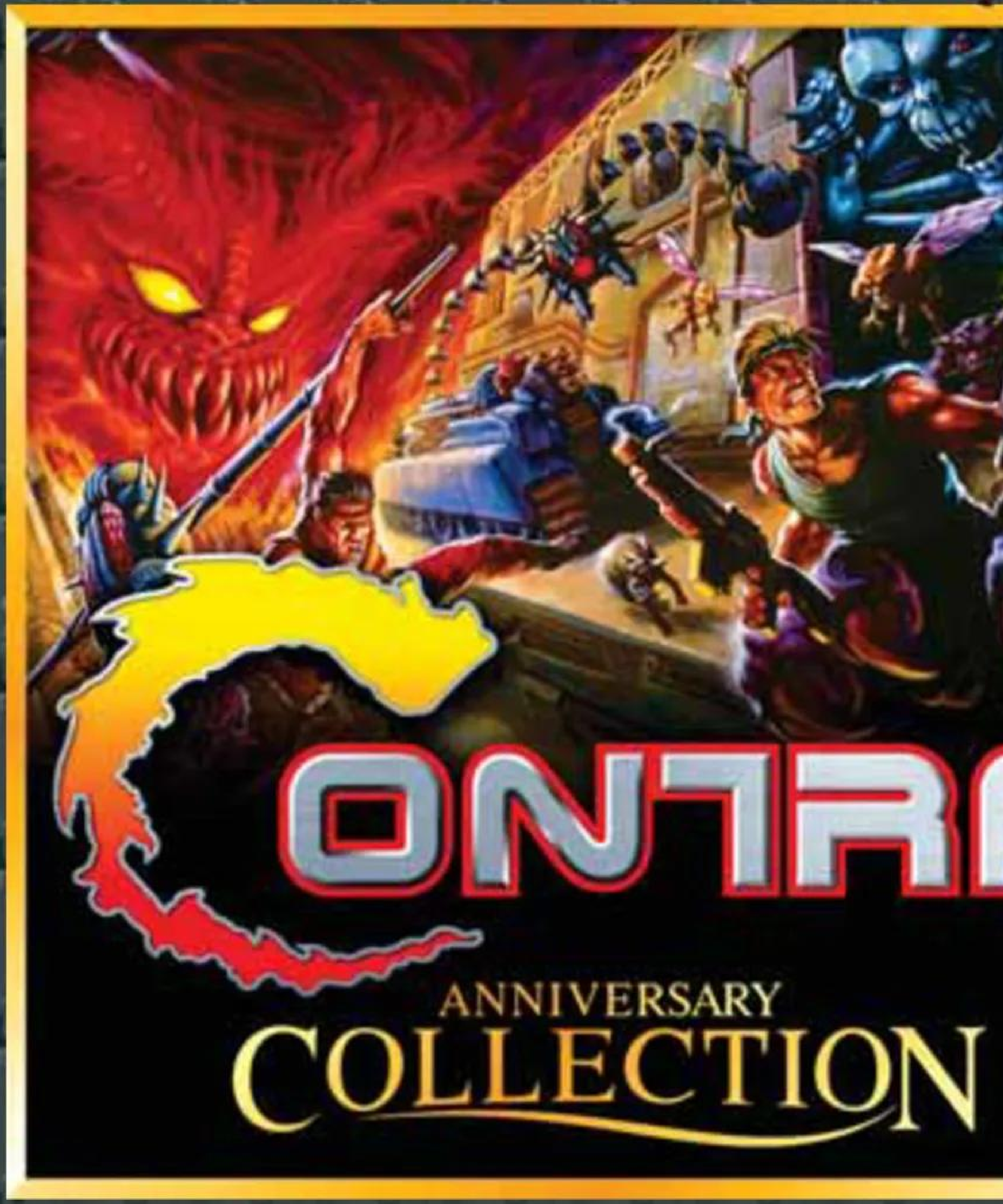


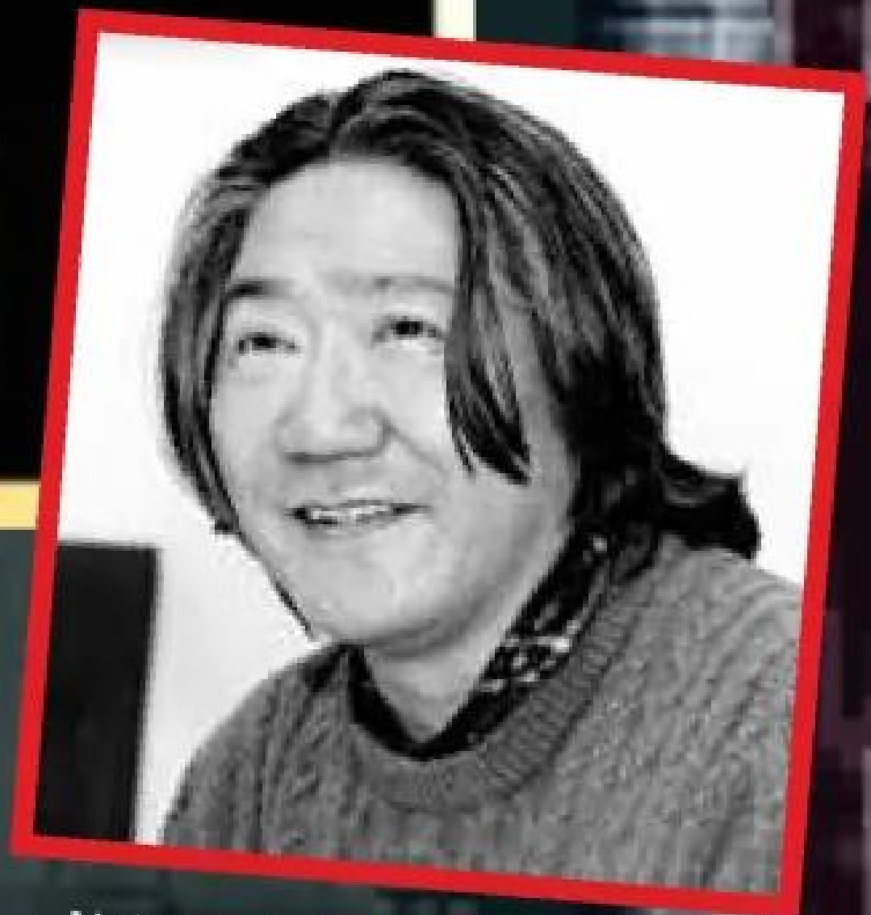
» The pay-off for a job well done is a lengthy, satisfying explosion – just like in the action films.

the most impressive game in the series. With 256 colours to play with at any time, lead designer and game director Nobuya Nakazato was able to convey a greater sense of detail in the sprites and backgrounds. Masayuki Saruta is credited with drawing the player characters, and as well as featuring more detail they have a range of additional animations, from climbing along walls and overhead bars to riding vehicles. Special effects are used liberally, too, with the SNES's mosaic effect used to convey damage on bosses rather than the traditional method of flashing different colours or blinking the sprite. The music was composed by Miki Higashino, Masanori Adachi, Tappi Iwase and Aki Hata, working to the brief of providing an impressive style reminiscent of Hollywood action movies. They succeeded spectacularly, with the orchestral parts particularly boosted by the SNES's unrivalled ability to utilise sampled audio. Each stage has a unique musical signature – the booming bass of the first stage's drums perfectly convey the gravity of the alien invasion, whereas the fourth stage has a much brighter, more energetic theme that fits the high speed and blue skies of that particular stage.

The game arrived in Japan under the name *Contra Spirits* in February 1992, and hit shelves in North America as *Contra III: The Alien Wars* in early April. These versions feature only minor differences, such as the removal of infinite continues in ▶

DEMON HEAD
MINI BOSS TANK





» Nobuya Nakazato is the director of both *Contra III* and *Hard Corps*.

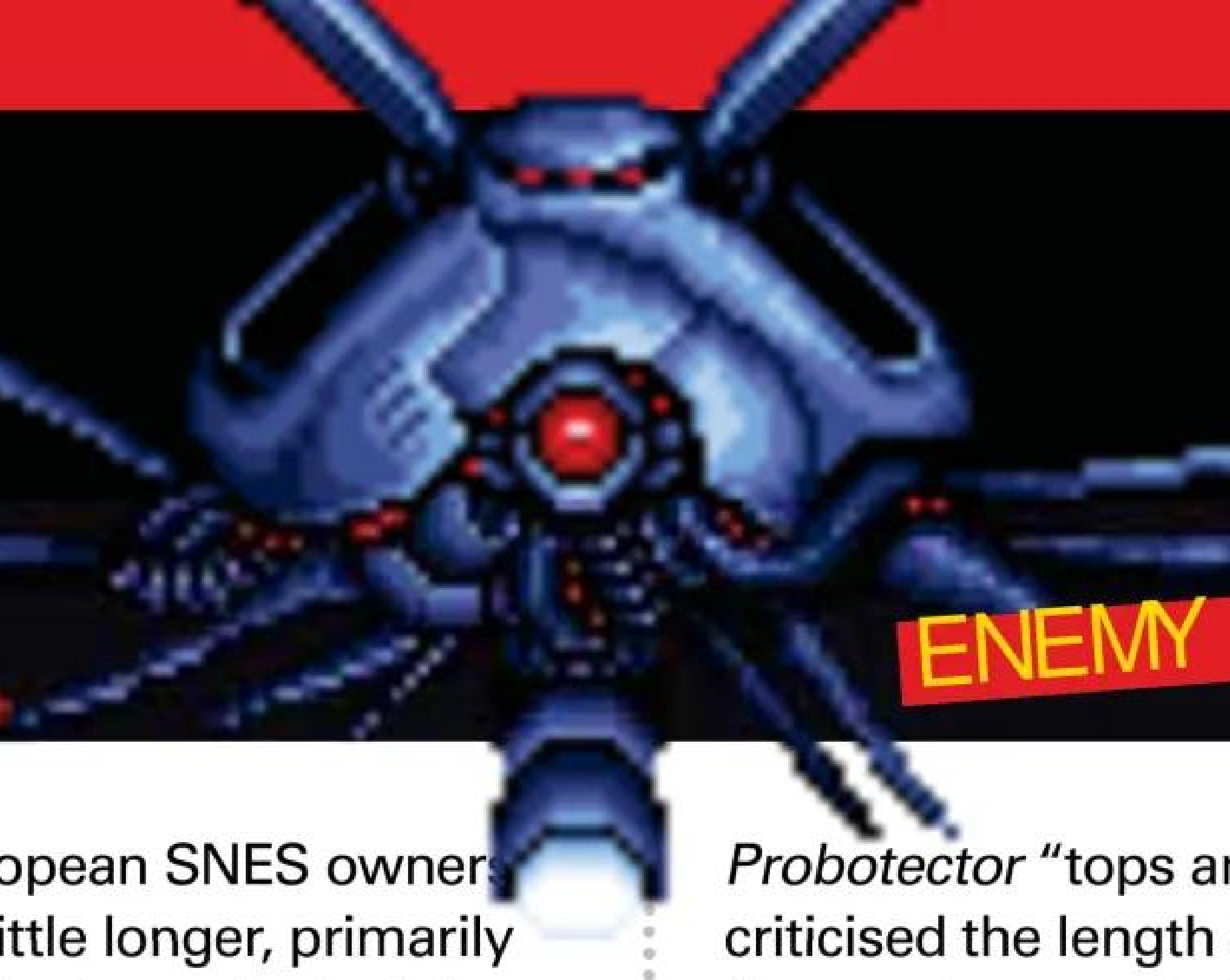
CONTRA COLLECTED

Series regular Nobuya Nakazato talks to us about Konami's new Contra Anniversary Collection

Konami's third compilation celebrating its 50th anniversary is dedicated to *Contra*. It has several classics, including the arcade games *Contra* and *Super Contra*, the NES game *Super C*, the SNES's *Contra III: The Alien Wars* and the Mega Drive's *Contra: Hard Corps*. "I have not been directly involved in the day-to-day development of the *Contra Anniversary Collection*, however the team has been kind enough to keep me regularly updated and I have given my insight when needed," explains *Contra III* director Nobuya Nakazato. Konami has taken extra care with the *Contra* compilation to ensure that each player will be able to experience their favourites in the way they prefer. "Since both *Contra* and *Probotector* are included, everyone will have a chance to experience the series in a new way," he reveals. "Die-hard fans will be happy to know that for the first time we also offer 50Hz and 60Hz support for the *Probotector* games!"

After *Contra III*, Nakazato went on to direct *Contra: Hard Corps* and produce *Contra: Shattered Soldier*, *Neo Contra* and *Contra Rebirth*. Having had such a long relationship with the series, you'd expect that he was heavily involved in picking the compilation's line-up, but that's not the case. "As I was not leading the development of the compilation, I did not decide which games would be included. However, I'm very happy with the line-up the team decided on, as I feel that it will please the fans of the franchise," he says. But it turns out that deciding the line-up is probably a job Nakazato wouldn't have relished, due to his outlook on game development. "When I develop games, I always think that the next one I come up with will be the best one yet," he explains. "But ultimately it's the players who choose their favourite game and it varies from player to player, so it's not up to me to pick the best *Contra* game."

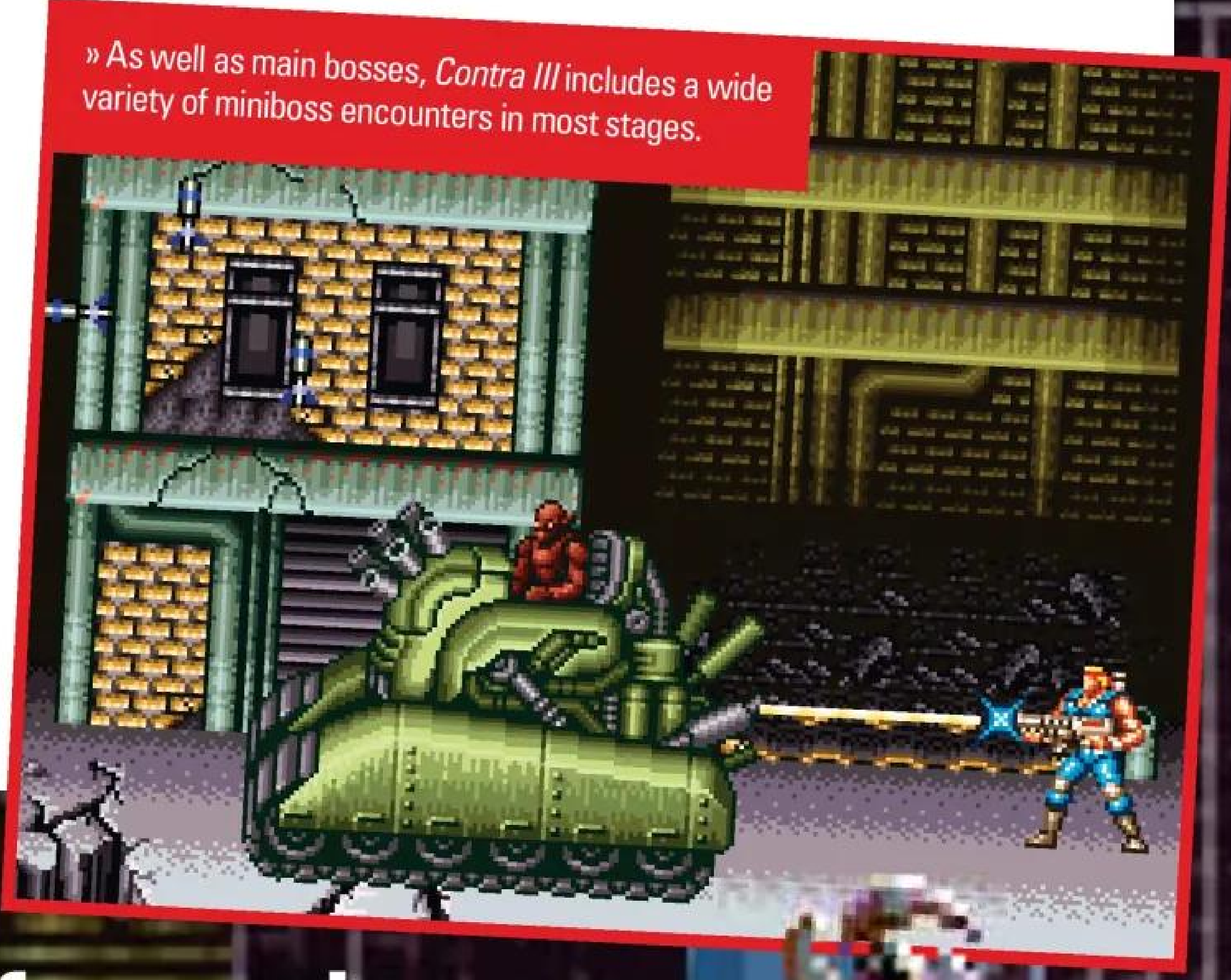
Contra Anniversary Collection is on release now and is available for PlayStation 4, Xbox One, Switch and PC.



the US version. European SNES owners would have to wait a little longer, primarily due to German attitudes towards depictions of humans engaging in violence – in keeping with prior games in the series, the main characters were replaced with robots. PAL players were finally treated to *Super Probotector: Alien Rebels* in November 1992. However, subsequent releases have seen the *Probotector* brand and edits dropped – the original Wii Virtual Console received *Super Probotector*, but European players received *Contra III* via the 3DS and Wii U Virtual Console services, as well as the SNES Mini.

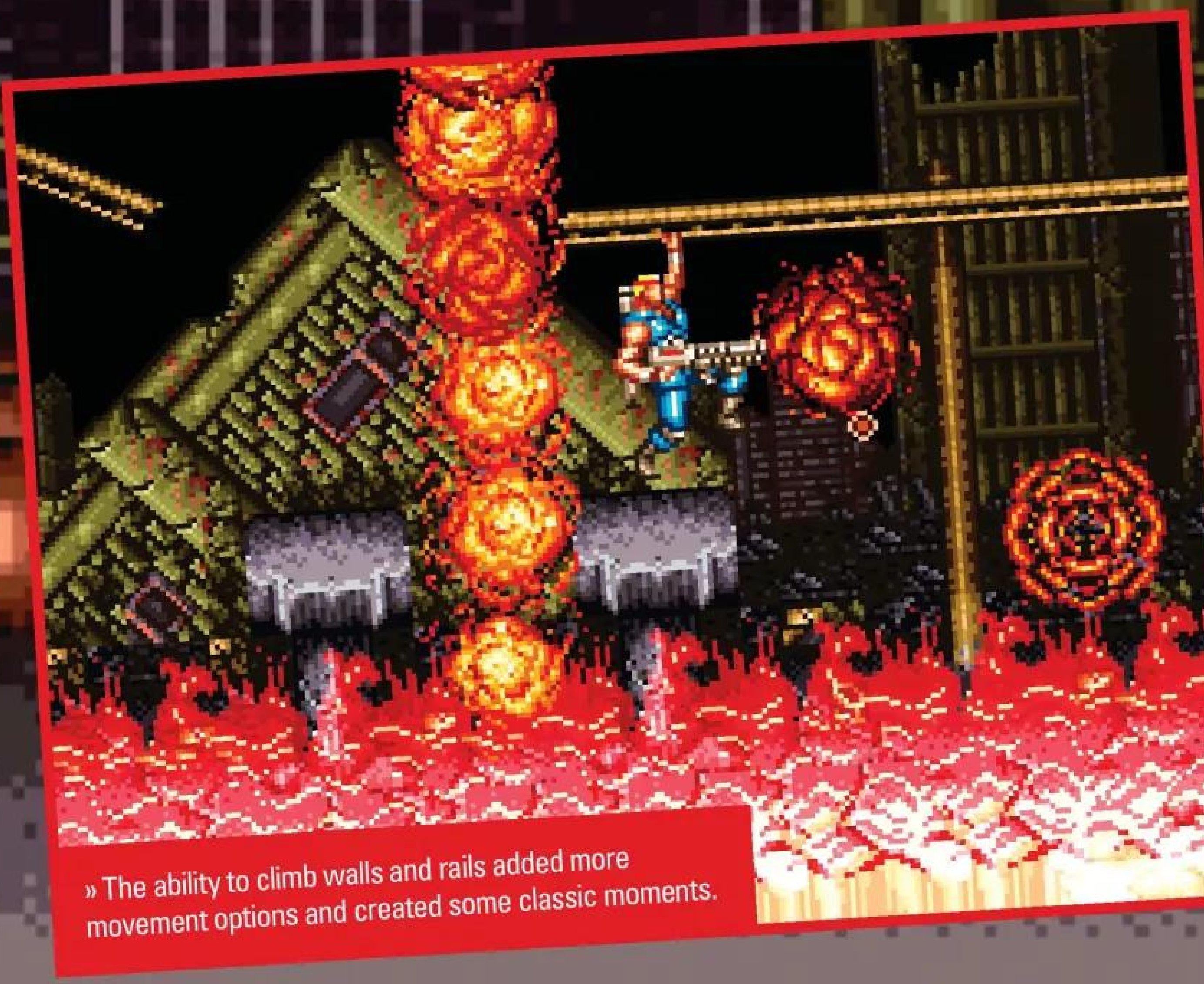
Many magazines in the UK jumped straight on the Japanese version, and came away impressed. In *Mean Machines*, Richard Leadbetter stated that Konami had "incorporated every Super NES graphics trick in the book, and added plenty of new ones" in a 95% review. *N-Force* scored the game 92%, noting "it's the sheer amount of stuff going on – attacks, bullets and power-ups zooming in from every direction – that makes the speed even more surprising". In *CVG*'s 91% review, Frank O'Connor praised the fact that the game's use of Mode 7 "isn't just a gimmick, it's an intrinsic part of the gameplay." *Super Play Gold* reviewed the European version and scored it 90%, concluding that *Super Probotector* "tops any obvious rivals" but criticised the length of the game, saying that it "seems to run out of steam rather too fast."

Unfortunately, the team behind this incredible game would not stick together for a sequel. Programmers Yaida and Suginami went off to work at Treasure, where they worked on *Gunstar Heroes*, and most of the other staff scattered off to other projects at Konami. By the time *Contra: Hard Corps* was developed for the Mega Drive, Nobuya Nakazato found himself directing a largely different development team, though it's worth noting that it turned out to be excellent, too. Even if a sequel had appeared on the SNES, it's hard to see how it could have improved things – and really, the fact that we want more just proves how good *Contra III* was to begin with. So if it's been a while since you've experienced it, grab a friend and revisit a game that delivers that action movie feel like nothing else of its era. *


» As well as main bosses, *Contra III* includes a wide variety of miniboss encounters in most stages.

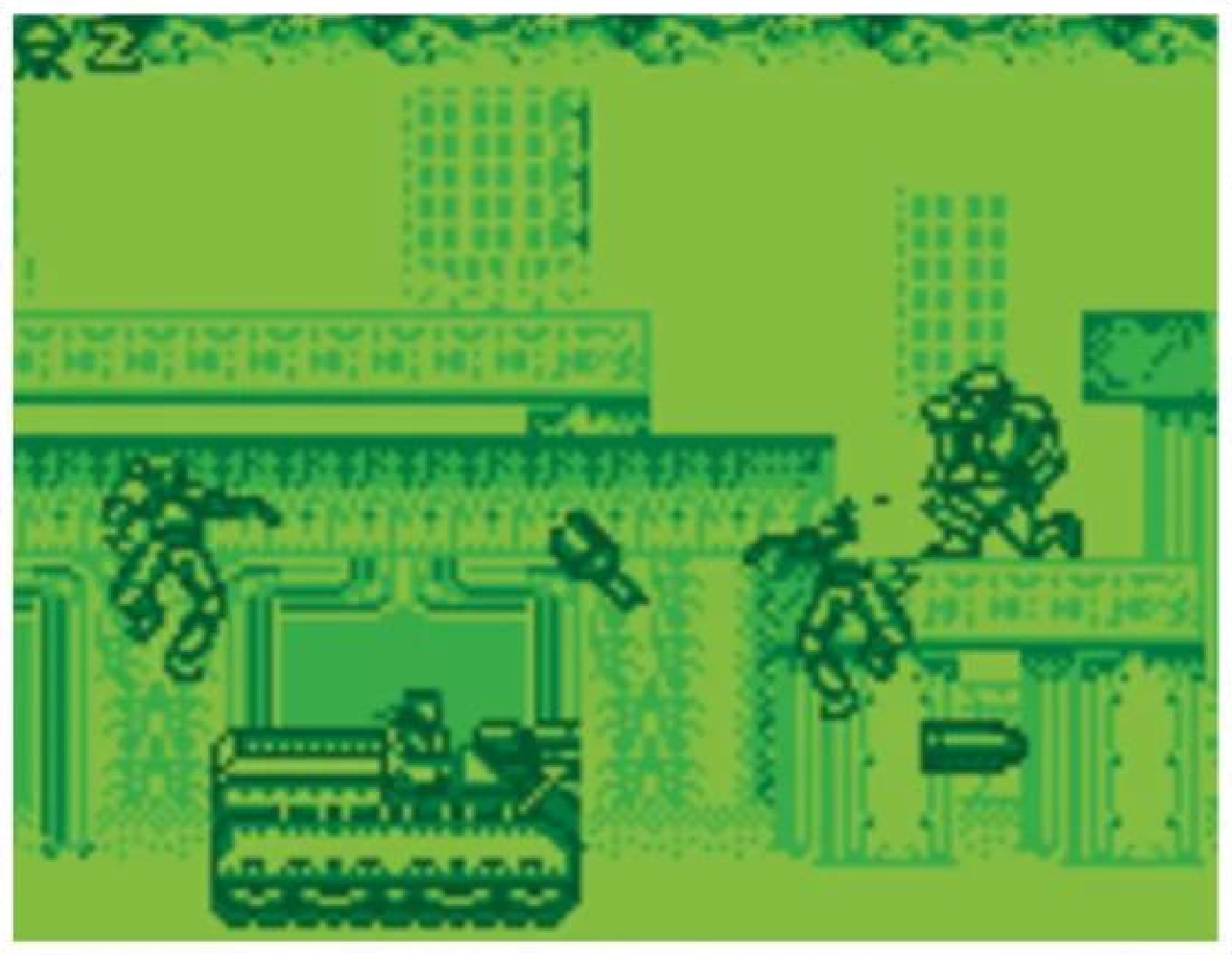
> "The technical leap forward is matched by the inventive level design"

BLADE SOLDIER


» The ability to climb walls and rails added more movement options and created some classic moments.

CONVERSION CAPERS

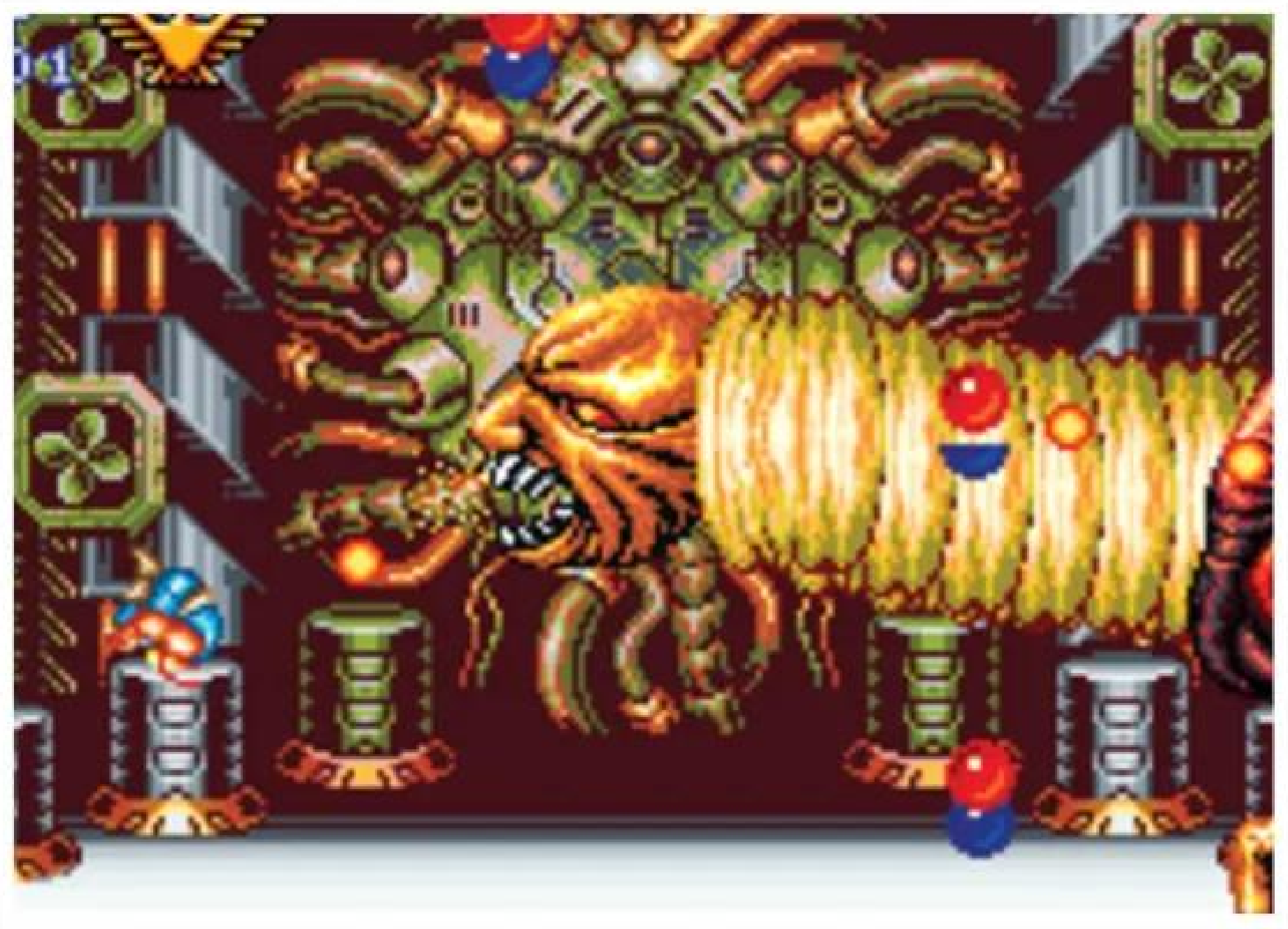
Contra III also made appearances on portable platforms – but it didn't make the journey in one piece



GAME BOY

■ Given that Factor 5 was trying to squeeze an advanced SNES game into the most limited of consoles available, it shouldn't be a surprise that *Contra III* (*Contra Spirits* in Japan and *Probotector 2* in Europe) isn't a perfect port. The graphical excess has been pared back, a number of minibosses and the jet bike stage have been removed, and there's no rotation in the overhead stages.

Once you've got past that, it's fair to say that the team managed to pull off a credible imitation that retains much of the original game's character. However, there are some things which don't work in its favour. It's not a fast game in the way that *Contra* titles usually are, and enemies have been made more resilient to make up for their diminished numbers. It's a good attempt, but not perfect.



GAME BOY ADVANCE

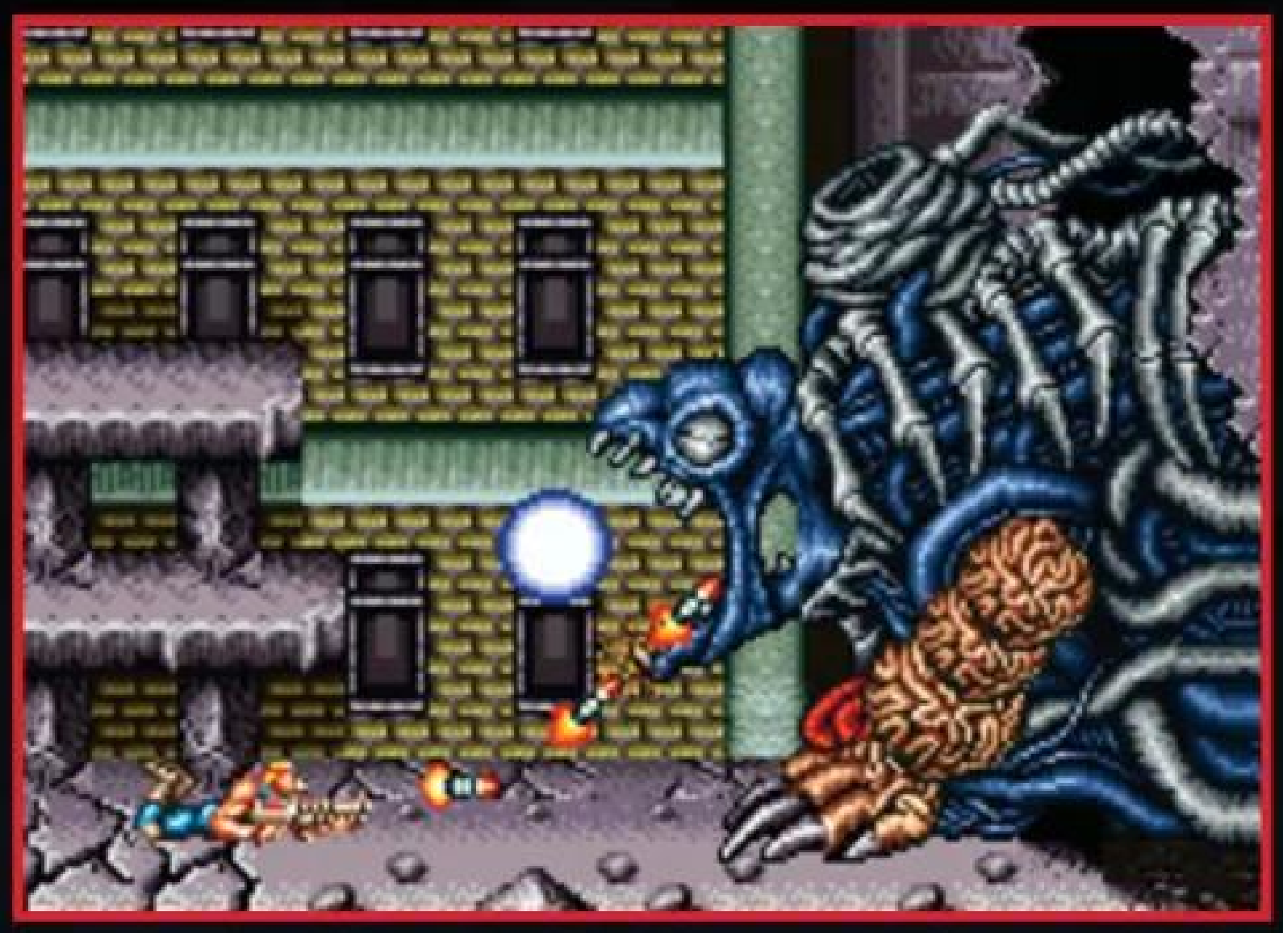
■ *Contra Advance: The Alien Wars EX*, or *Contra: Hard Spirits* in Japan, was released in 2002 and ranks as one of the least faithful SNES conversions on the system. Some changes would be expected – for example, graphics were brightened to compensate for the dark screen of the original GBA. Likewise the smaller viewing area, which is due to the console's 240x160 resolution.

However, this conversion hacks out some pretty substantial features. It's no longer possible to use bombs, nor can you switch between two held weapons. Hard mode is gone, and easy mode cuts off after the fourth stage. But the biggest change is that the two Mode 7 stages have been cut out of the game and replaced with a couple of stages from *Contra: Hard Corps*. They're still good, but… why?

SNIPER
DEMON INSECT

BOSS RUSH

Contra III has some of the best boss fights of the 16-bit era – here's a complete rundown of the big ones

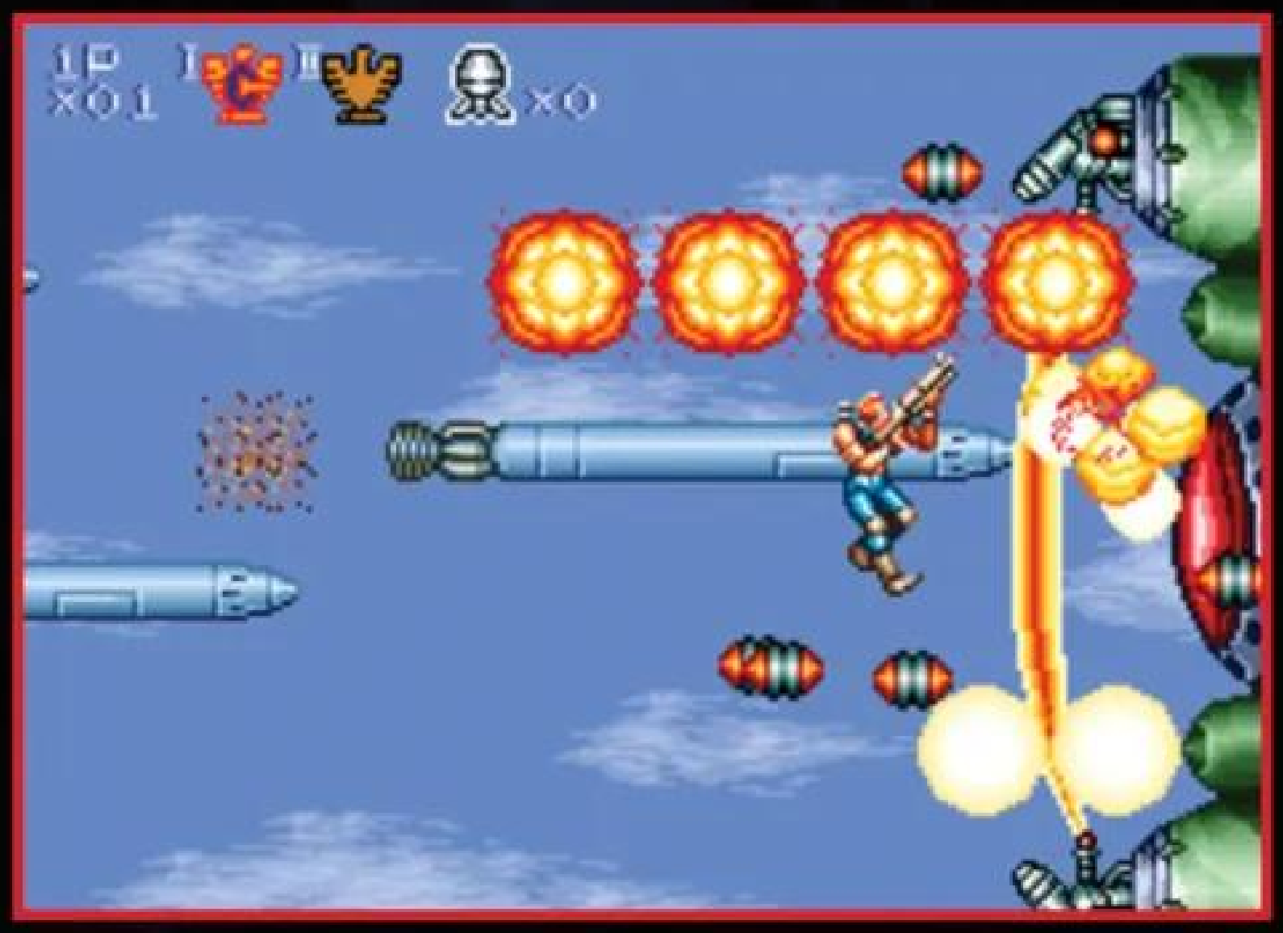


STAGE 1

■ Your first major foe looks like a big, ugly biomechanical tortoise. Its mouth is rather dangerous – it can spit up more enemies and fire a powerful laser.

HOW TO BEAT IT

Underneath the neck and in front of the front legs, you'll see that the boss has an obvious red weak spot. Use the platforms to dodge the enemy's attacks, and aim for the weak spot whenever reasonably possible.

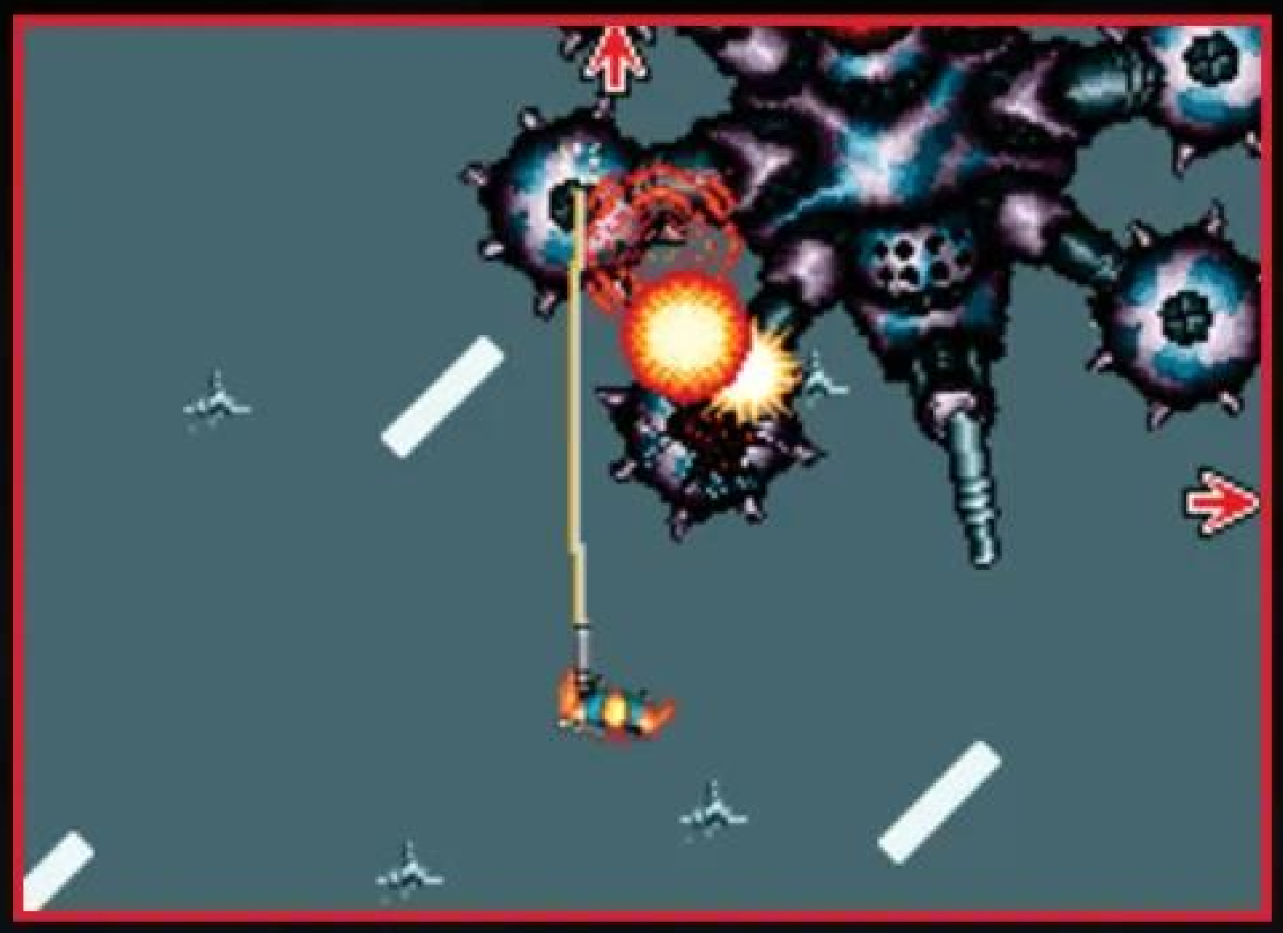


STAGE 4

■ You'll fight this giant airship during the stage, but the boss fight takes place entirely in the air. Thankfully, you only encounter its well-protected rear.

HOW TO BEAT IT

The boss is protected by a shield, which has a two turrets placed at its top and bottom. Destroy those, and then aim for the gigantic red target – but watch out, as it will start to target the missiles you're riding.

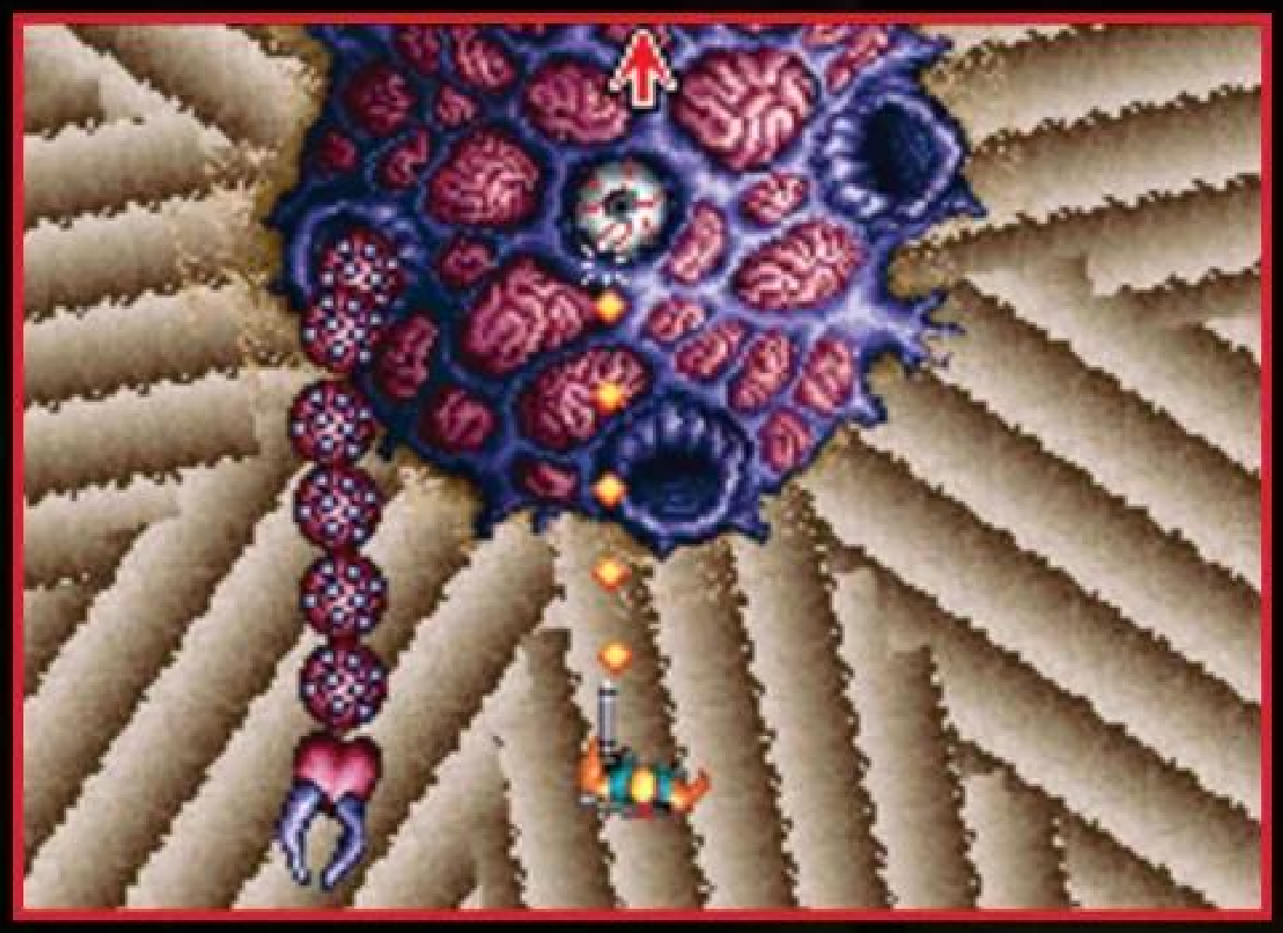


STAGE 2

■ This robot is a bit like a spider, but with six legs rather than eight. The small central 'body' has a flashing red target where you would expect to see a head.

HOW TO BEAT IT

First, you'll need to destroy the circular targets at the end of each of the robot's legs. Once that's done, it will start jumping and attempting to land on you. Avoid it, and fire at the red target when it lands.

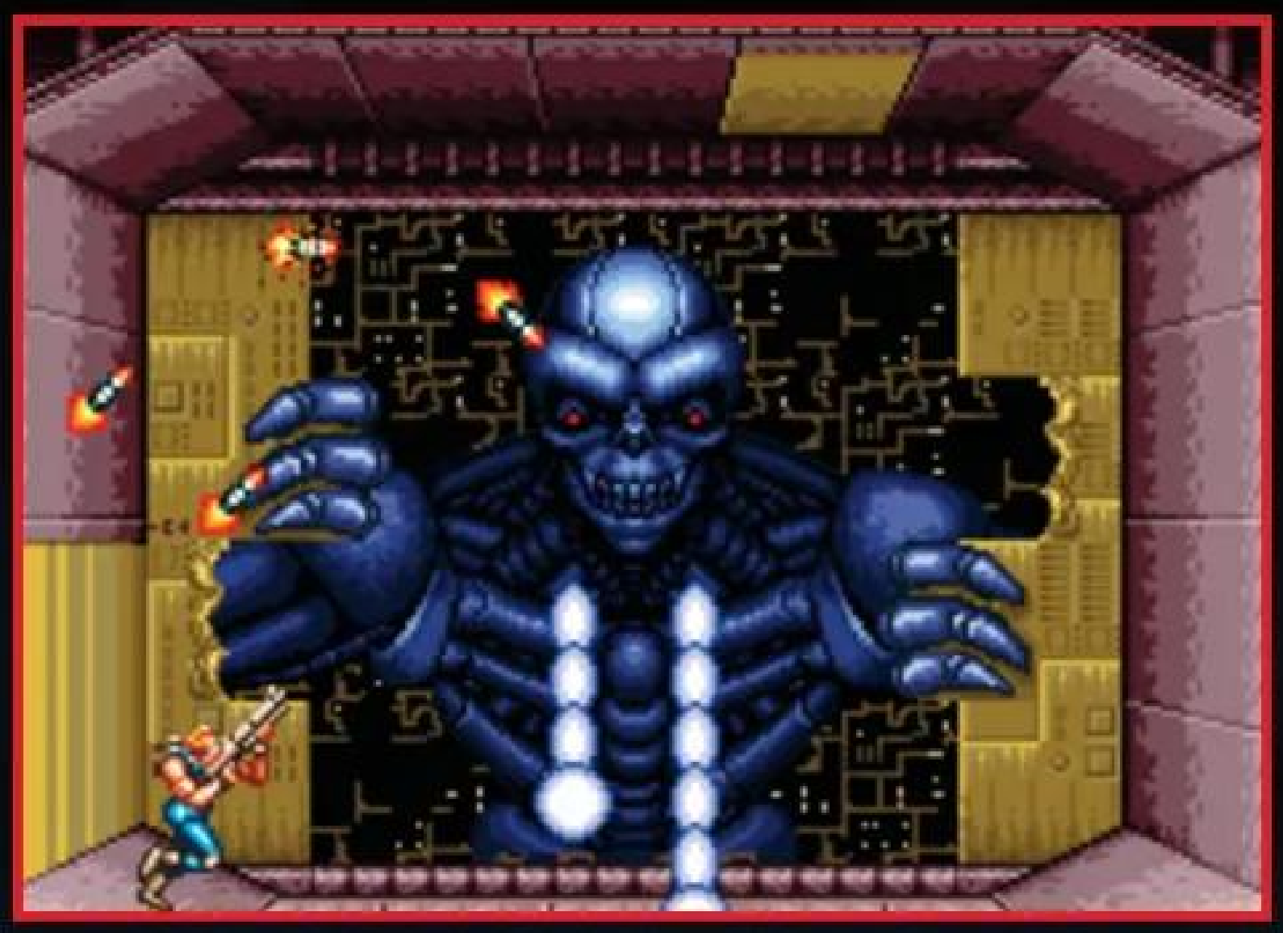


STAGE 5

■ This looks like some sort of creepy, horrible hive, complete with what appears to be a clawed tentacle, but is in fact a worm-like second creature.

HOW TO BEAT IT

Aim for the eye in the centre, while avoiding the worm. Once you've hit it enough, the worm will chase you further and the ground will shift, so you'll need to counteract the rotation with the shoulder buttons.

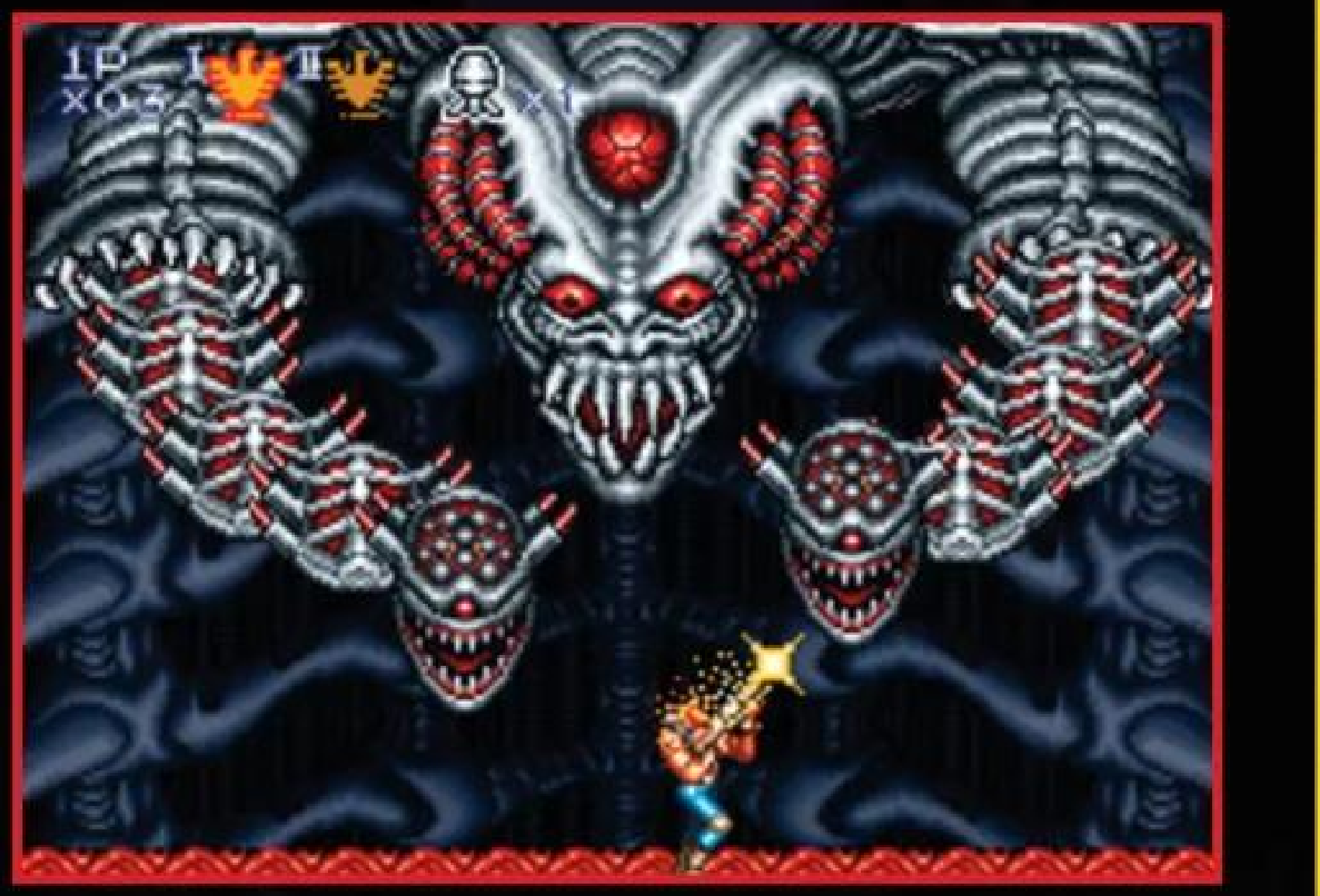


STAGE 3

■ Two robots look suspiciously like they have wandered in from *Snatcher*, and they're accompanied by a terrifyingly huge robot friend.

HOW TO BEAT IT

The robots will attack both high and low, so cling to the ceiling until the bottom one starts firing, then drop behind it and attack. Once the big guy shows up, watch out for the chasing lasers and aim for the head.



STAGE 6

■ This is it – the big bad alien, a living embodiment of extraterrestrial terror. It begins as a multi-mouthed monstrosity and even its brain can put up a fight.

HOW TO BEAT IT

In the first phase, knock out its arms before firing at its head. During the brain phase, you choose its attack pattern – memorise what each does and aim for the brain. And don't relax when the chopper takes off!

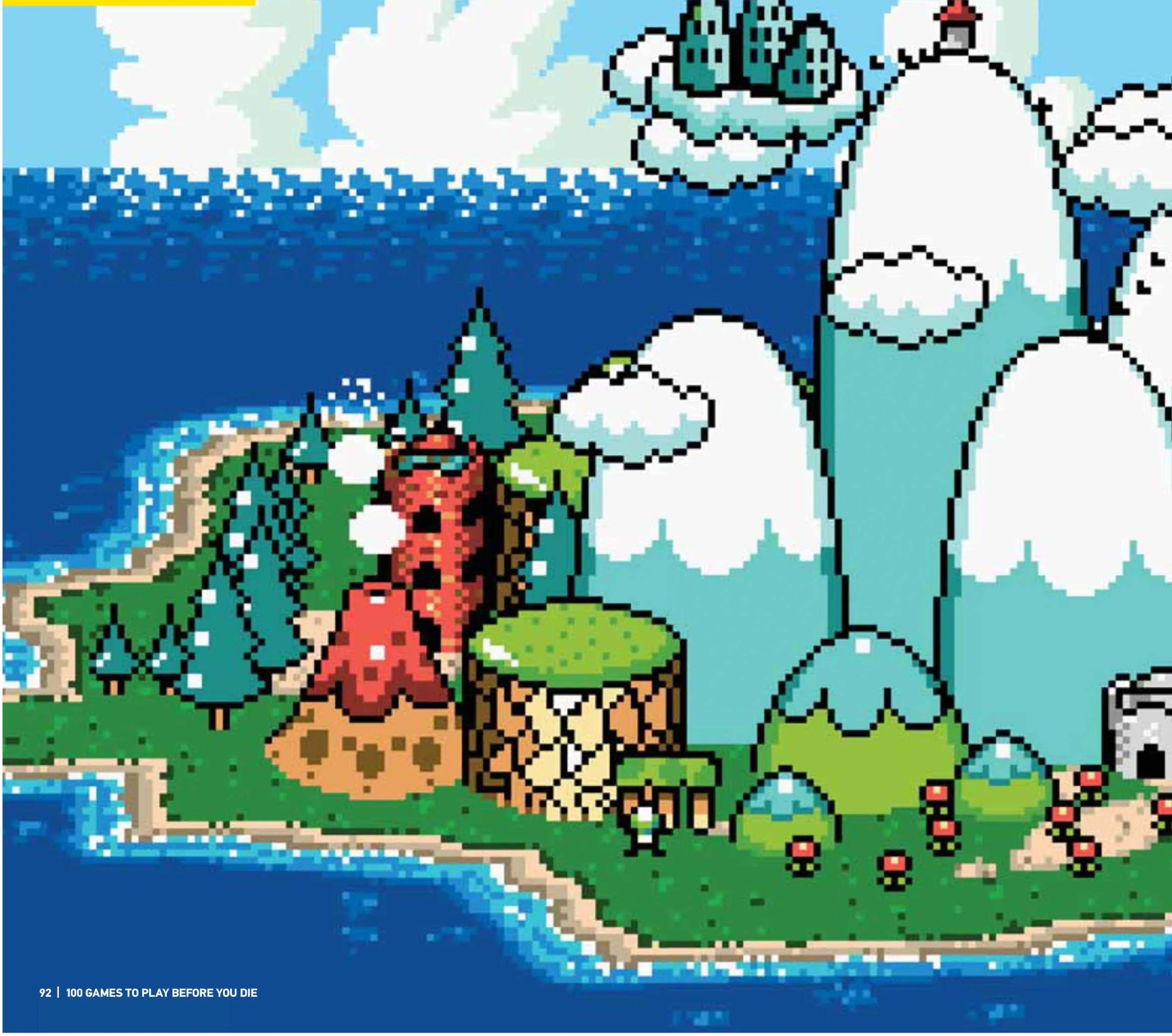
SULLY
BIRDMAN

TANK
CAR
RUNNER

SUPER MARIO WORLD 2
YOSHI'S ISLAND
SUPER NINTENDO

IN THE KNOW

- » **PUBLISHER:** NINTENDO
- » **DEVELOPER:** NINTENDO EAD
- » **RELEASED:** 1995
- » **PLATFORM:** SNES
- » **GENRE:** PLATFORMER



THE MAKING OF SUPER MARIO WORLD 2 YOSHI'S ISLAND

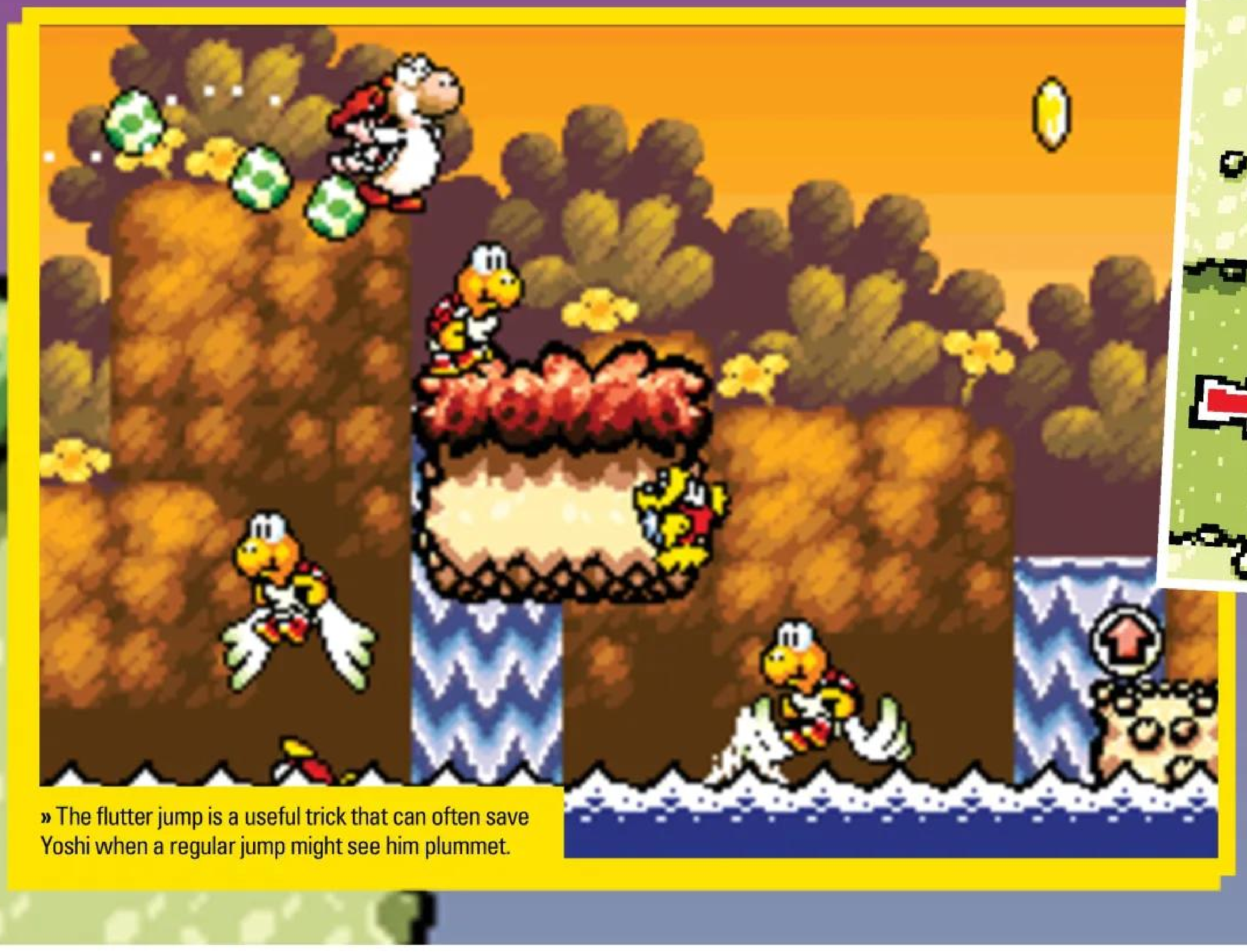
Tasked with delivering a successor to Super Mario World, Nintendo's developers decided to entrust the starring role to a new hero and knocked it out of the park. Takashi Tezuka and Shigefumi Hino look back on the development of Yoshi's Island

There's an enormous burden of expectation that comes with following up a game like *Super Mario World*. Retro Gamer readers voted it the greatest game of all time, and many would argue that it was as close as you could get to a perfect game, as it built admirably on the already refined Mario platform formula while adding the benefits of 16-bit technology. It would be very hard to elaborate on the formula, especially given that delays to the Ultra 64 project meant that Nintendo was still tied to the 16-bit SNES. With player expectations guaranteed to be through the roof, was there even any sense in trying to create a traditional *Mario* sequel?

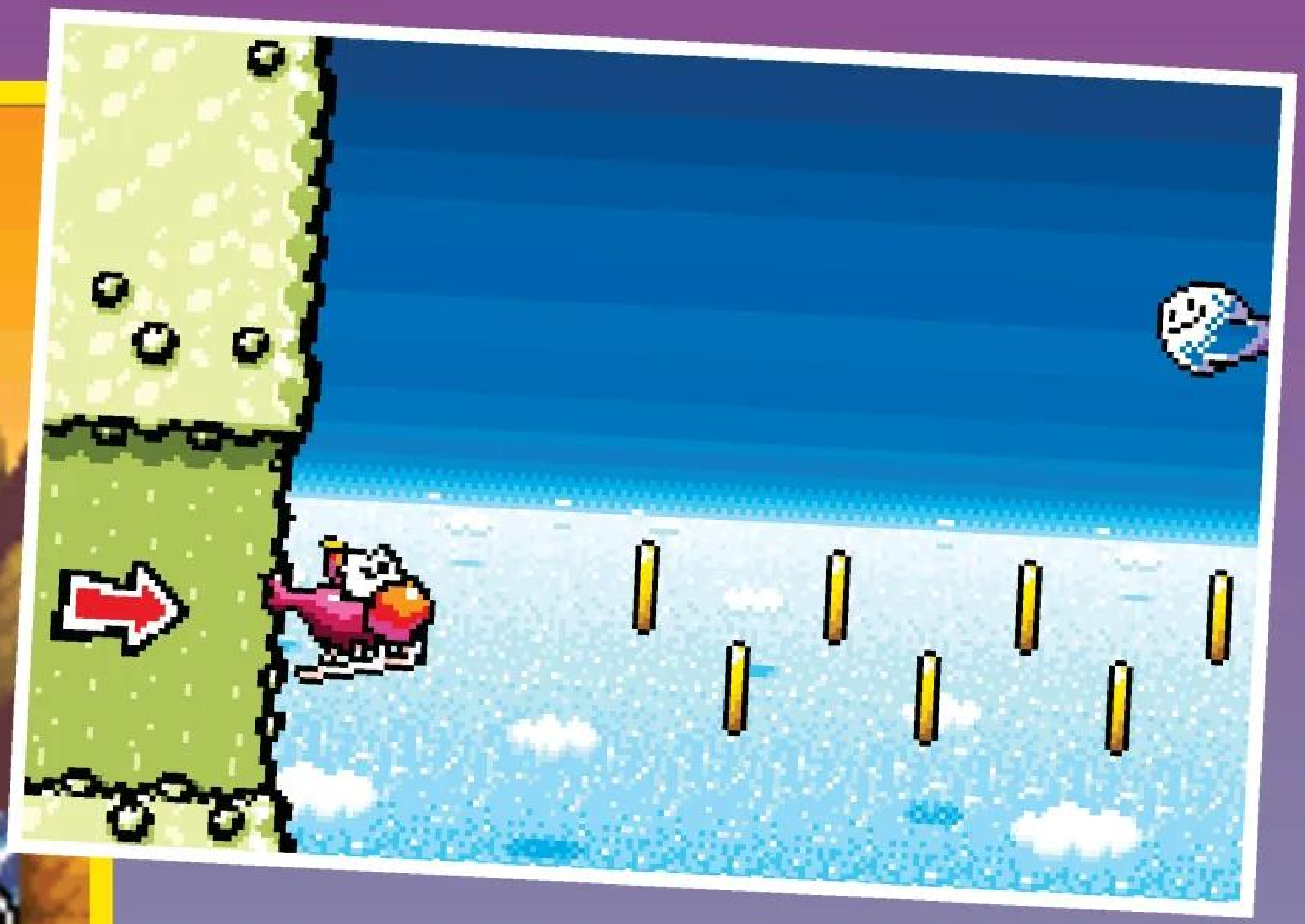
It turns out that Takashi Tezuka and Shigefumi Hino didn't think so. They were two of the directors of *Yoshi's Island*, alongside fellow directors Toshihiko Nakago and Hideki Konno, with Shigeru Miyamoto acting as producer. Working together at Nintendo EAD, this team wanted to take a different approach instead. "We felt we'd done everything we wanted to for side-scrolling with *Super Mario World*, and so wanted to try creating a platformer with a different angle to it," the developers explain. "Before *Yoshi's Island*, we'd only created games with Mario as the lead character. We felt that changing the lead character would give us a different perspective and different gameplay possibilities, and so we started thinking up a game with Yoshi as the lead."

That makes sense – but the Mushroom Kingdom is home to many interesting characters, many of whom have also starred in spin-offs. What made Yoshi the character of choice over the likes of Wario, Luigi or Peach? This goes back to the creation of the character for *Super Mario World*, as we discover. "The idea for Yoshi came about because Mr Miyamoto wanted to have Mario ride a horse. We thought it would be better to have a new character rather than a horse, so Mr Hino and I went about creating one," Tezuka tells us. "Yoshi turned into quite the cute character, and we were very interested in creating some kind of spin-off with him; that's where it all began."

This wasn't Yoshi's first starring role in a game, of course. Mario's trusty steed had previously appeared headlined three games, the puzzle games *Mario & Yoshi* and *Yoshi's Cookie* and the Super Scope blaster *Yoshi's Safari*. But none



» The flutter jump is a useful trick that can often save Yoshi when a regular jump might see him plummet.

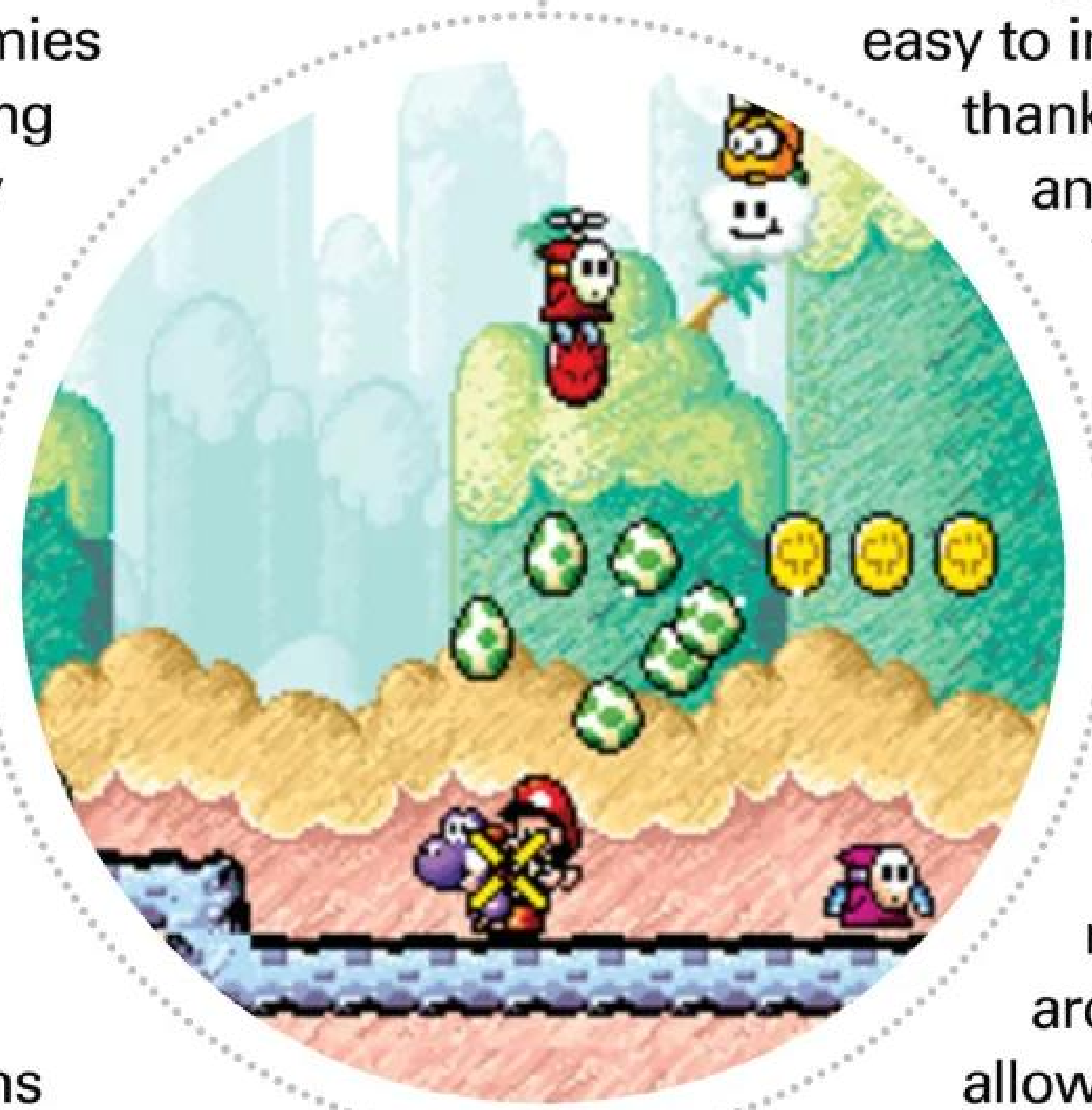


» Transforming into a helicopter is fun, but it's important to find a way to transform back – you won't get anywhere without one.

of these were platform games, and Yoshi's only appearance in a platform game so far had been as a sub-character. So while Yoshi had certain established abilities such as his ability to grab enemies with his tongue and eat them, the team had a great deal of freedom to decide on new abilities and a new style of play that would provide a clear break from traditional *Mario* games.

That said, it wasn't easy for the team to come up with these new and interesting ideas – according to Hino, such things were quickly seized upon when they did arrive. "I remember Mr Tezuka coming in suddenly one morning and dropping an idea on us," he says. "The development team were hungry for the seeds of an idea and so we ran with it; we discussed them over and over and polished them into something we could implement in game." Abilities that Yoshi gained in *Yoshi's Island* include the 'flutter jump' – an extended jump where the dinosaur struggles against gravity in a cartoonish fashion – as well as the 'ground pound' jumping attack that could be used to smash stakes into the floor, something Mario would later adopt. Yoshi also gained a variety of possible vehicle transformations including helicopters, cars and submarines, but these could only be used in certain places.

However, the ability that most closely tied into Yoshi's existing skillset was his unique capability to create eggs. As in *Super Mario World*, Yoshi could use his tongue to eat enemies and then spit them back out at other enemies as an attack. However, by pushing the down button with an enemy in Yoshi's mouth, the player could have Yoshi lay an egg. Instead of containing items or more Yoshis, as they did in the likes of *Super Mario World*, eggs could be thrown, rebounding off walls, breaking through barriers, collecting objects and smashing enemies.



"We wanted to include egg-throwing as throwing actions weren't something that had appeared much in *Mario* games," Tezuka tells us. "Having said that, though, giving users the ability to simultaneously control both Yoshi's movement and the direction they throw eggs in proved challenging and gave us quite the headache!" However, it proved to be a crucial element of the game. "Having said that, though, fusing this egg-throwing mechanic into a platformer helped us invent ideas that hadn't been possible until that point," Hino points out. "It was a real boon for ideas for the game!"

While the egg-throwing mechanic would be easy to implement in modern games thanks to the prevalence of dual analogue sticks, achieving it in *Yoshi's Island* required some ingenuity. The development team managed to hit upon an elegant solution that managed to squeeze the whole process into two button presses. By hitting the A button, the player would reveal an aiming reticule that moved back and forth along an arc in front of Yoshi – while still allowing him to run and jump freely. Hitting the A button again would cause Yoshi to throw an egg in the direction he was currently aiming for. It was the trickiest of Yoshi's skills to get to grips with as a player, but it gave the game a unique feeling amongst platform games.

One of the other things the new star allowed the Nintendo EAD team to do was make an

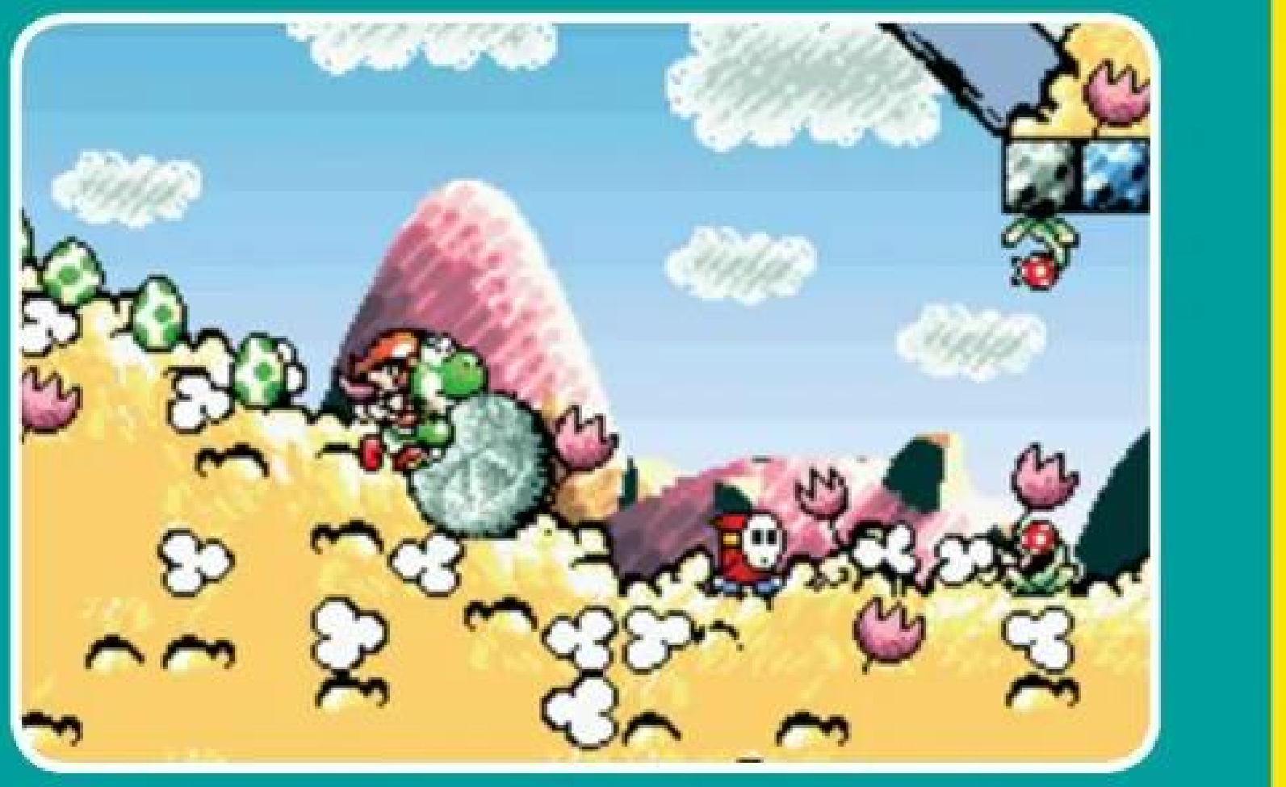
> "We wanted to include egg-throwing as throwing actions weren't something that had appeared much in Mario games"
>
> Takashi Tezuka

adjustment to the difficulty of the game. "Unlike the *Mario* series, we tried to give the gameplay a more gentle and relaxed pacing, as opposed to turning it into a platformer that requires players to master tricky techniques," explains Tezuka. "So, for example, there's no time limit on the stages, and it's a little easier to control Yoshi's jumps as he flutter jumps unlike Mario. As we were adding in these little adjustments, we came up with the idea of having some exploration elements as part of the gameplay and slowly the game took shape."

Sometimes the desire to provide exploration elements and a relaxed game experience were conflicting goals, as was the case when deciding on a progression system. *Super Mario Bros 3* and *Super Mario World* had both used maps that allowed the player to select the next stage. Why did the team choose to return to linear progression for *Yoshi's Island*? "We looked at many different map styles for this game. Seeing as we had already used a board game-style map system in *Super Mario World*, we settled on a linear path as a way of returning to our beginnings," Tezuka replies. "The map used in *Super Mario World* and other titles gives users the option to choose the level of difficulty when there's a branch in

YOSHI IN MY POCKET

How did Yoshi's greatest adventure translate to the small screen of the Game Boy Advance?



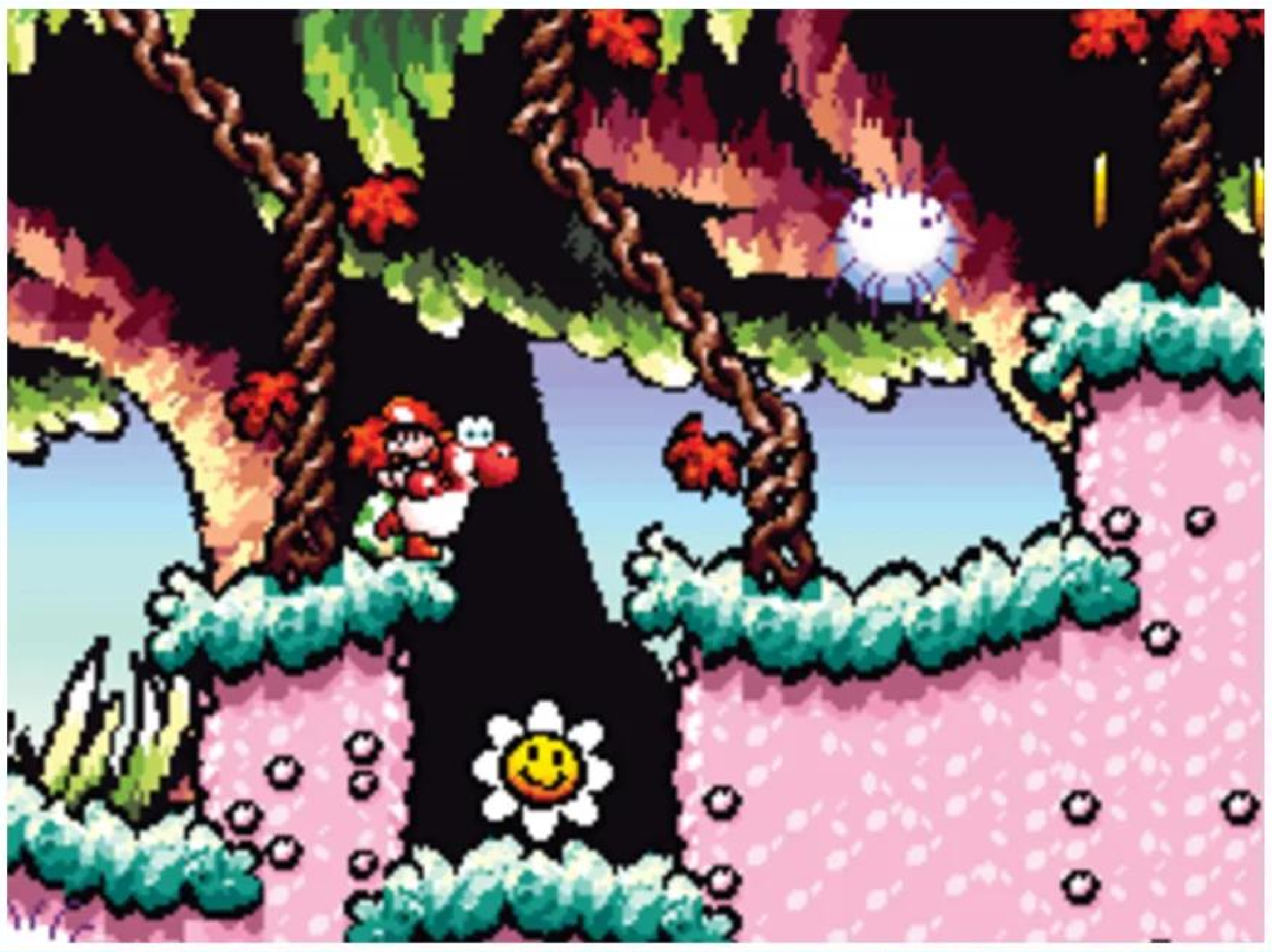
» Colours were lightened in this portable version to account for the GBA's dark screen.

The Game Boy Advance was often seen as a perfect handheld home for SNES games, and after *Super Mario World* was successfully miniaturised, it felt like *Yoshi's Island* would be a natural successor. Nintendo delivered on that expectation in September 2002 with *Super Mario Advance 3: Yoshi's Island*, issuing a conversion that received a broadly positive reception. Many purists swear by the SNES original, but this version does have some unique content worth investigating.

The game is mostly faithful, but some changes were made in order to lower the difficulty level from the original SNES version. The countdown to recover Baby Mario is noticeably slower in the GBA game, and various minor level design changes were made such as the addition of Middle Ring checkpoints and Shy Guy spawning pipes. The original game's Extra Levels have been modified, and a set of six new Secret Levels were added. One aspect of the game was made harder, though – red coins were made visually identical to regular coins prior to collection.

Changes were also made to the game's presentation. Colours have been lightened throughout to compensate for the original Game Boy Advance's dark display, and the colouring of the Yoshis has been made more consistent with later games. The game also received a new translation. However, this version isn't quite perfect. The music and sound effects don't quite match the original quality, there's occasional slowdown and some graphical effects were downgraded too (most notably in stage 1-7, Touch Fuzzy Get Dizzy).

» Fuzzy is probably a Class A controlled substance in the Mushroom Kingdom, judging by its effect on Yoshi…



DEVELOPER HIGHLIGHTS

SUPER MARIO WORLD (PICTURED)
SYSTEM: SNES
YEAR: 1990

SUPER MARIO KART
SYSTEM: SNES
YEAR: 1992

SUPER MARIO 64
SYSTEM: N64
YEAR: 1996

YOSHI'S (HI)STORY

A look back at Yoshi's other solo adventures…

1991

MARIO & YOSHI

NES/GAME BOY

This puzzle game sees you swapping stacks of items to encase enemies between pieces of eggshell. It's okay, but not a top-tier game on either of its platforms.

1992

YOSHI'S COOKIE

NES/SNES/GAME BOY

This is another puzzler, in which you mix and match sweet treats in order to create matching rows or columns. It's another game that's interesting but far from tremendous.

1993

YOSHI'S SAFARI

SNES

In this Super Scope game, Mario rides Yoshi around rotating Mode 7 landscapes, blasting Goombas and Koopas out of the sky. It's another strictly average spin-off, too.

1996

TETRIS ATTACK

SNES/GAME BOY

It's the excellent Japanese puzzle game *Panel De Pon*, but reskinned with a Yoshi theme that was deemed more marketable to international audiences.

1998

YOSHI'S STORY

N64

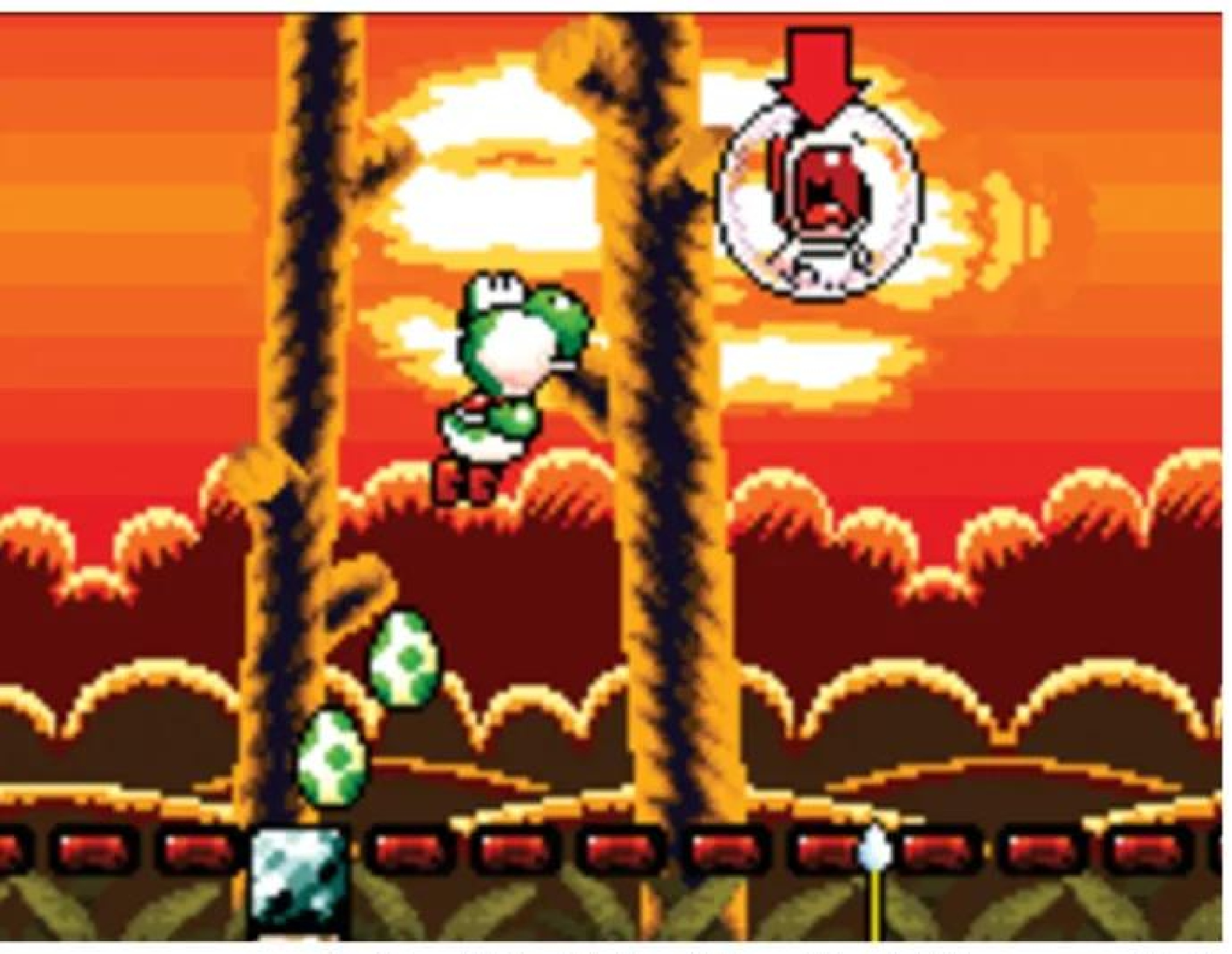
Yoshi's second platform outing used prerendered 3D graphics and tasked Yoshi's with finding huge fruit quotas. It's fun, but a bit easy and not quite as good as *Yoshi's Island*.

2001

YOSHI'S STORY (GBA)

GAME BOY ADVANCE

This short, looping version of the N64 game was a tech demo that was never released. However, it was shown to journalists to demonstrate the 32-bit handheld's power.



» Get hit and Baby Mario will float off in a bubble – recover him in the time limit or the Magikoopas will get him.

the path," adds Hino. "With *Yoshi's Island*, we designed the game so that players can play the courses over again with different objectives so they can get better. So, with that in mind, rather than users going through the game selecting what level of difficulty they want to play, as done with the board game-style maps, our intention was to make it possible for users to progress through the game by setting their own goals."

As well as the ability to set your own level of challenge, one of the key aspects of the game's gentle pacing was the ability for the player to get hit without being in too much danger. In the Mario games, the player was only ever a couple of hits away from losing a life, with finite opportunities to grab power-ups in order to prevent that outcome. In *Yoshi's Island*, getting hit would cause Yoshi to lose his cargo, and the player had a short amount of time to recover it – but if they did so successfully that time limit would reset, meaning that it was possible to take an unlimited number of hits per stage. And in a surprising role reversal, that cargo was Baby Mario.

"I don't think we started out with the intention of having the roles reversed," reveals Hino. "Once we decided to make Yoshi the lead, we thought he could have something ride on his back and so decided Yoshi's mission would be to carry something through the game. We wanted to add something extra to the traditional side-scrolling gameplay of having players just proceed to the right to reach a goal, and so having Yoshi need to carry something across the map was a good fit." That makes sense given Yoshi's original role as a mount for a certain plucky plumber, but why did Mario need to be a baby? "We decided to have Yoshi carry Mario because that's what he's always done, but we made Mario into a baby as it wouldn't make sense for the game if Mario could walk around by himself," Hino explains. "This setup was also a big help for writing the story for the game."

That story started with a stork attempting to deliver Baby Mario and Luigi to their parents, only to be attacked by Bowser's henchman Kamek, a Magikoopa who could foresee the great problems that these brothers would cause for his boss. While he succeeded in kidnapping the Baby

2004

YOSHI'S UNIVERSAL GRAVITATION
GAME BOY ADVANCE

This platformer was developed by Artoon, and had a gimmick in which you could tilt the playfield using a tilt sensor. Unfortunately, it was very poor.

2005

YOSHI TOUCH & GO
DS

This experimental game saw players drawing on the touchscreen to guide Mario to Yoshi, before controlling Yoshi's egg-throwing in scrolling segments.

2006

YOSHI'S ISLAND DS
DS

This sequel to *Yoshi's Island* retains the style and mechanics of the SNES game, but adds new babies – Peach, Donkey Kong, Wario and Bowser now join Mario.

2014

YOSHI'S NEW ISLAND
3DS

While it tried to follow the success of the previous *Yoshi's Island* games, this 3DS outing was a bit too easy and bland to make the same impression as its predecessors.

2015

YOSHI'S WOOLLY WORLD
WII U

This platformer sports a knitted aesthetic and offered a pretty good time, particularly when played in co-op. The 3DS conversion is known as *Poochy & Yoshi's Woolly World.*

2019

YOSHI'S CRAFTED WORLD
SWITCH

Woolly World's success earned Good-Feel the opportunity to do another platform game. Read more about it on page 30.

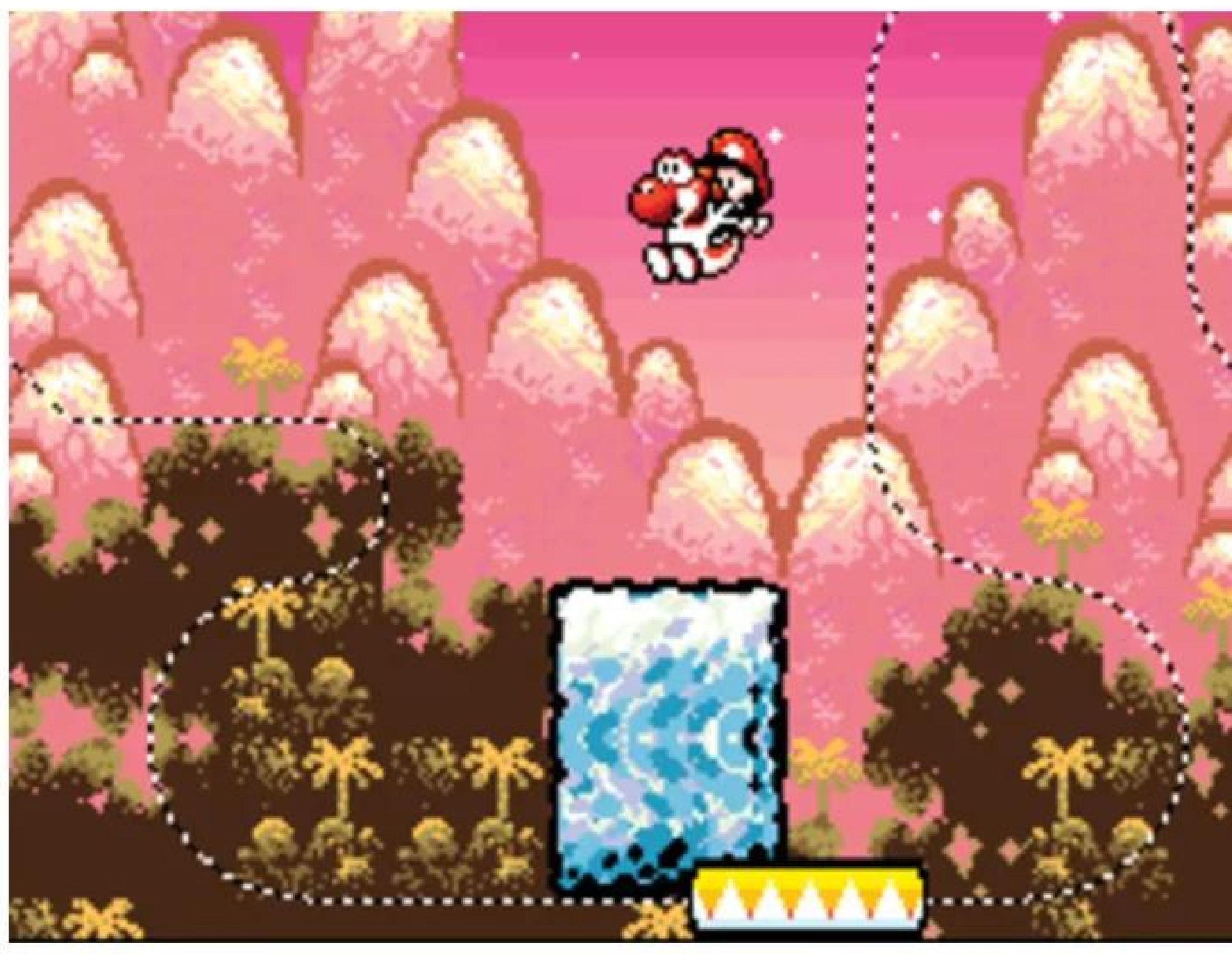
> "We spent a lot of time trying to come up with a new and different look for the game"
>
> Shigefumi Hino

Luigi, Baby Mario was lost in the confusion and fell to Yoshi's Island. With the instinctive bond that brothers have, Baby Mario could sense his brother's location, and the Yoshis decided to take him to rescue Baby Luigi and reunite them both with their parents. And for those of you unfamiliar with the game, that plural is no typo. "One of the ideas that came out while we were creating the story, and which I'm particularly taken with, is that there are many different Yoshis in the game," says Tezuka. "Normally, the lead character is a singular character in the game world, so personally I thought the idea of having different Yoshis working together and taking turns to carry Baby Mario through the game was really interesting."

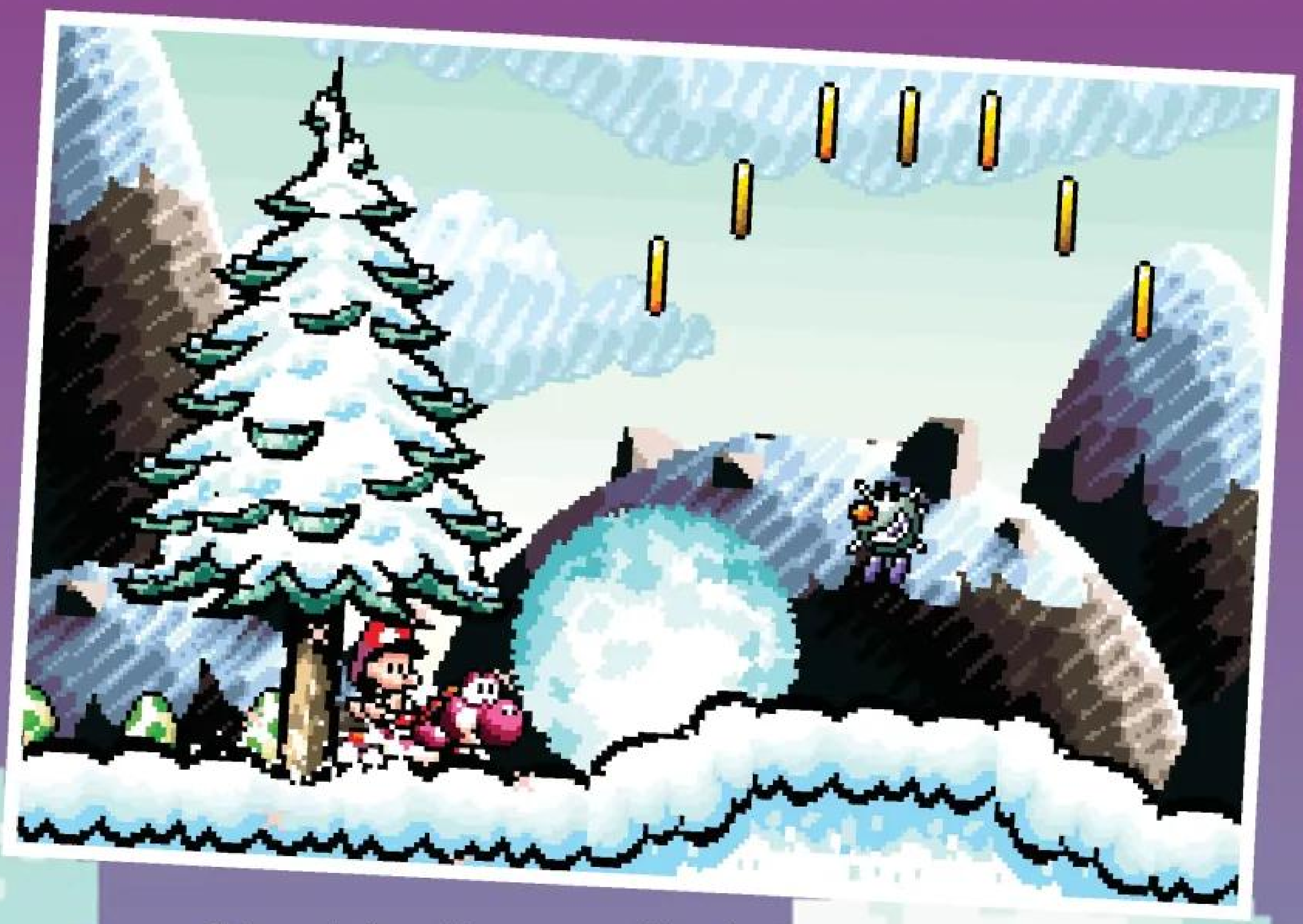
This storybook presentation plays well with the game's aesthetic – it sports a hand-drawn, colouring book style with crayon backgrounds. While this wasn't the plan from the start, the idea of being visually unique was one of the team's aims. "We spent a lot of time trying to come up with a new and different look for the game. We tried out many ideas and the most interesting was one I drew as a last-ditch attempt: a cloud that had this very rough scribbled look to it," explains Hino. "Everyone agreed it was perfect and so we decided to go ahead with giving the game a hand-drawn look. At the time, there were a lot of other beautiful graphics out there, and we wanted to differentiate our title from these. I also watched a lot of children's TV shows as well for inspiration."

That wasn't the only reason that the Nintendo EAD team ultimately chose to use a deliberately low-tech look. "At the time, our company was abuzz with talk of the graphics used in Rare's *Donkey Kong Country.* There was definitely a feeling that those sorts of visuals might go on to become the mainstream. I wanted us to come at things from a different angle," says Tezuka. "Although there were some people in the company who were expecting us to follow *Donkey Kong Country,* a decision was taken that we should put our weight behind a completely different sort of visual look," adds Hino. "It was around about the time that we decided on that direction that Mr Hisashi Nogami joined the company as a designer. As we were competing together and having fun coming up with different designs, we slowly settled on the feel we wanted the visuals to

» Although *Yoshi's Island* has a gentler pace, there are still challenges like tricky moving platform paths.



> **“We competed in the team to see what were the most amusing or fun things we could draw”**
>
> Takashi Tezuka



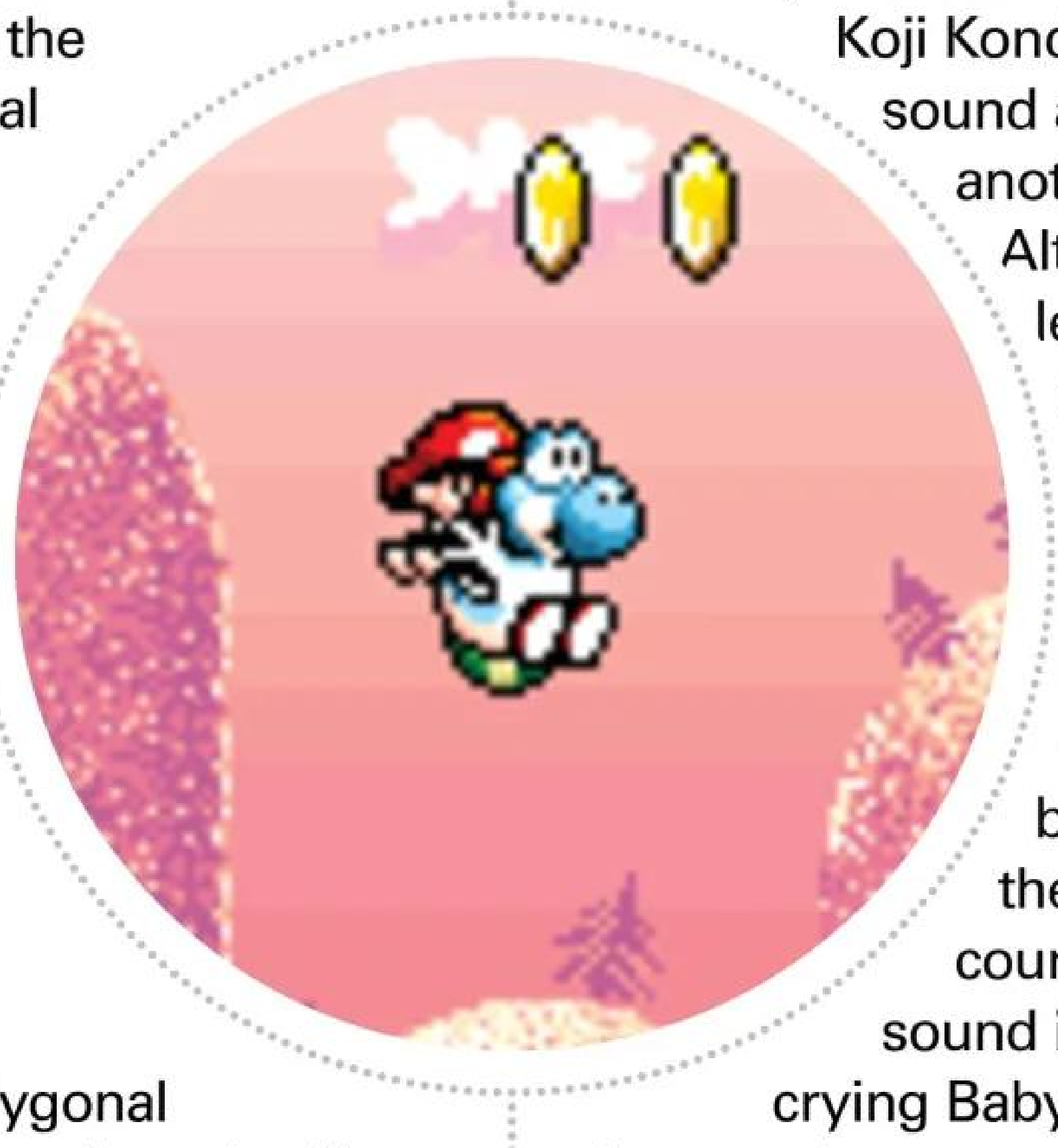
»This snowball gets bigger as you roll it, and can wipe out enemies in its path.

▶ have.” In a 2018 interview with *Kotaku*, Nogami mentioned the game’s hand-drawn look was actually achieved quite literally – images were drawn by hand, scanned and recreated as pixel art

Of course, the ironic thing is that despite that rejection of *Donkey Kong Country*’s look, *Yoshi’s Island* was a game that did things that few other SNES games could. It’s something that isn’t lost on the developers. “*Yoshi’s Island* has this very warm and friendly feel to it, but a lot of technical effort went into making the game,” they note. “It’s actually one of the later SNES games, so [it] makes use of all the developmental know-how we’d built up to that point, as well as what was considered the latest in technology with the Super FX 2 chip.”

The use of the enhancement chip is a curious one, and we were interested to know where the decision to use it came about. “In principle, we look at what the software and hardware can do and look at what sorts of visuals or gameplay we can create with that technology. It was mentioned one day that the Super FX 2 technology was available, and a suggestion was made about using it,” explain the developers. “We were very excited and decided to make use of it for two reasons: the first was that as software developers we wanted to use all new technology we could, and the other point was that this technology offered further gameplay and visual possibilities (eg, object (sprite) rotation and a large increase in the number of screen colours possible).”

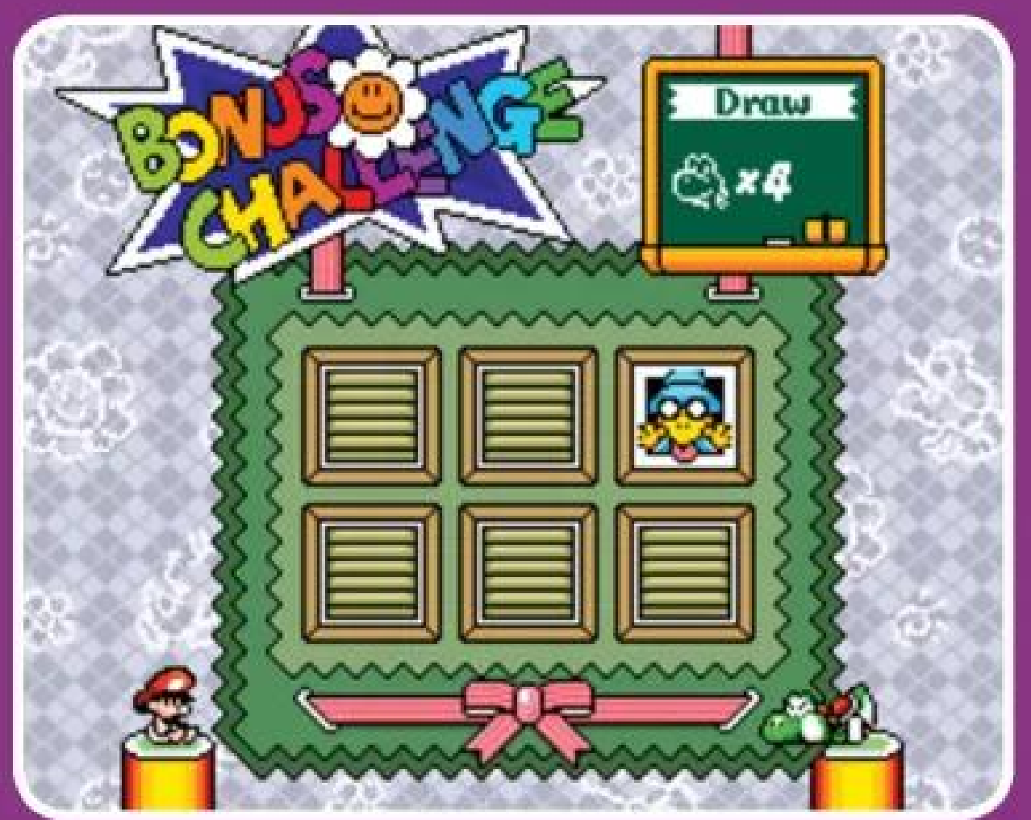
What was so interesting about the use of the Super FX 2 chip? That would be the way it was deployed – the original chip, designed by the UK team at Argonaut, had been used to power the polygonal graphics of *Starwing*. All of the subsequent Super FX games, like *Stunt Race FX* and Vortex, had been 3D games too. Few gamers would have guessed that the first outing of the updated version would be in a 2D game, but it proved key to some of the most impressive visual effects in *Yoshi’s Island*. Some of those were actually polygonal special effects, such as falling walls and rolling platforms. But the Super FX 2 was primarily used here for manipulating 2D sprites, a technique that Nintendo called ‘Morphmation’ in advertising. As well as adding extra layers of parallax scrolling, the chip allowed the console to handle multiple rotating sprites on the screen, perform some psychedelic background warping and even squash and stretch sprites. These were most frequently used in the game’s boss battles, which routinely featured some absolutely colossal sprites.



Koji Kondo was behind the game’s sound and music, and delivered another set of memorable themes. Although still present, there was less focus on the bongos and other additional percussion that had marked Yoshi’s presence in *Super Mario World*, and there were some pretty bold musical choices – most notably the music box tune that played during the game’s intro sequence. Of course, the most memorable sound in the game was that of the crying Baby Mario, which triggered whenever he was separated from his dinosaur guardian – we’d avoid getting hit just to make sure that we didn’t hear it. The Japan-only official soundtrack CD is now a prized item in its own right, with used copies selling for extraordinary prices.

DINOSAUR DISTRACTIONS

Yoshi’s Island has six bonus games and four mini battles – here’s the complete guide to them

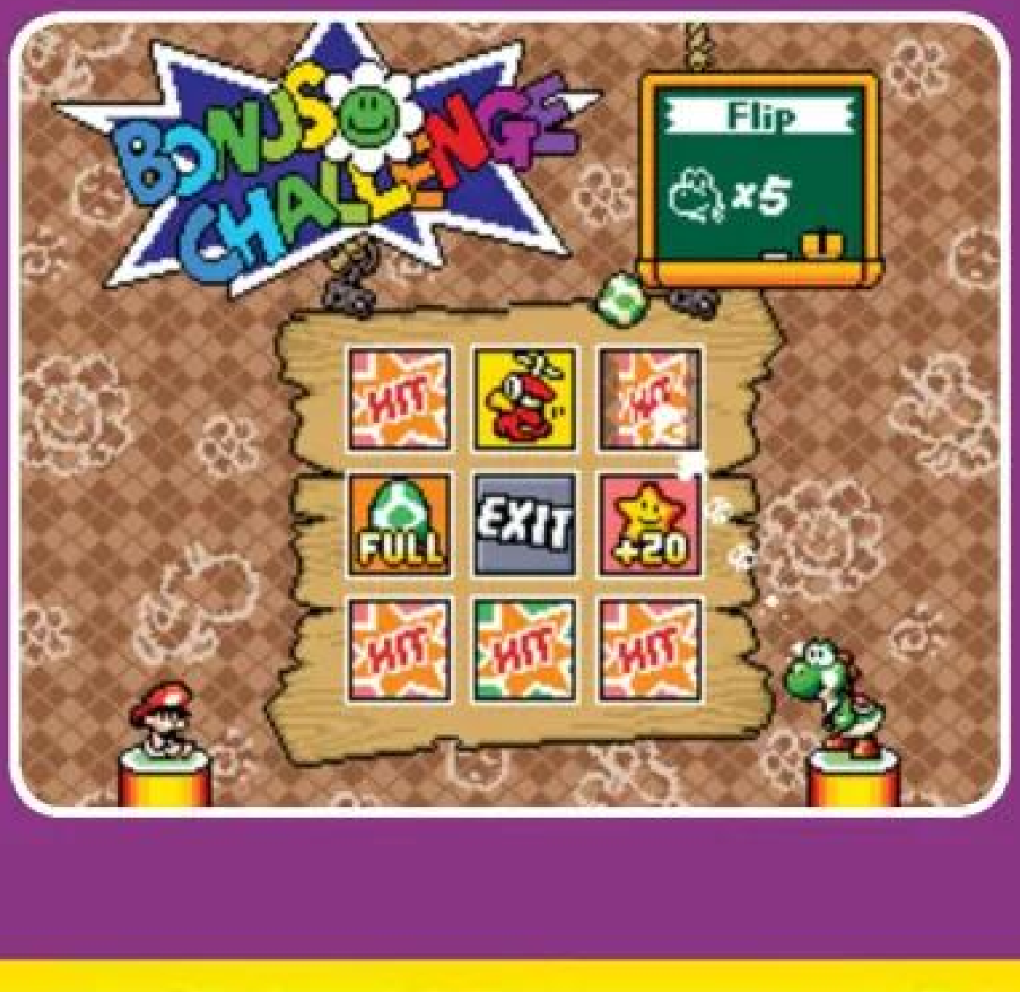


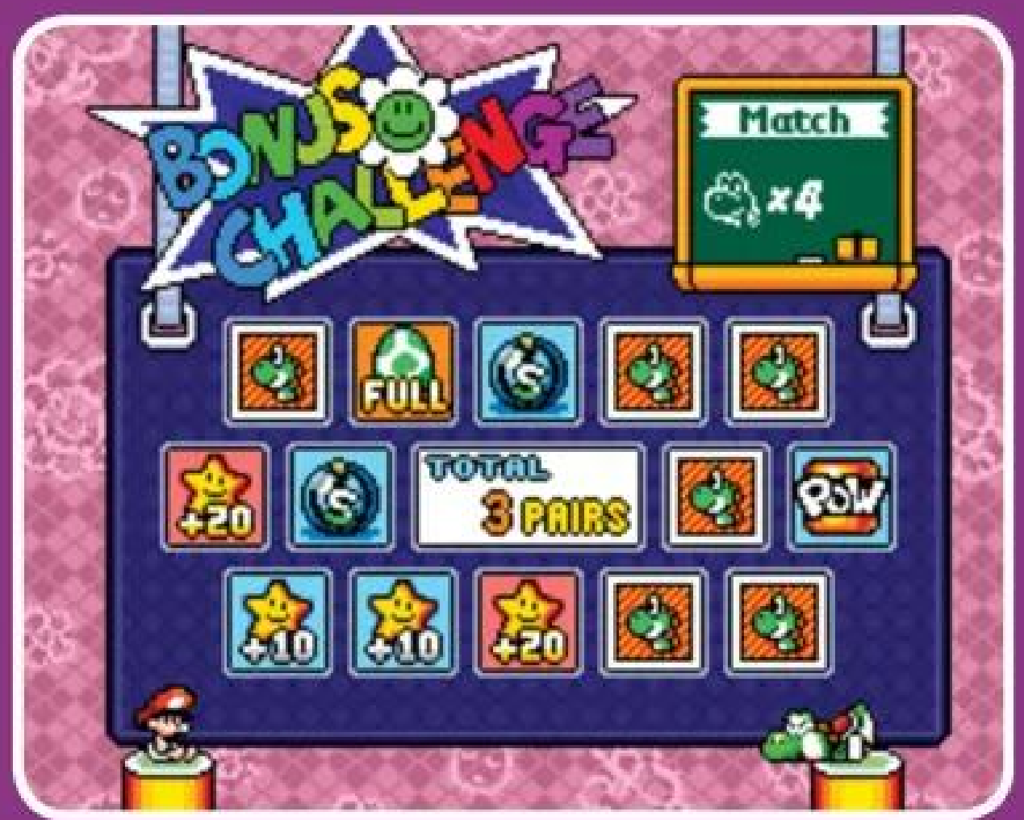
▲ DRAWING LOTS

■ This game’s the simplest of the lot – you pick one of the six cards, and receive whatever’s on it. If you reveal Kamek, you get nothing.

▼ FLIP CARDS

■ Flipping cards on this board reveals items. If you reveal Kamek, you’ll lose the lot, but flipping seven good ones wins you ten lives.



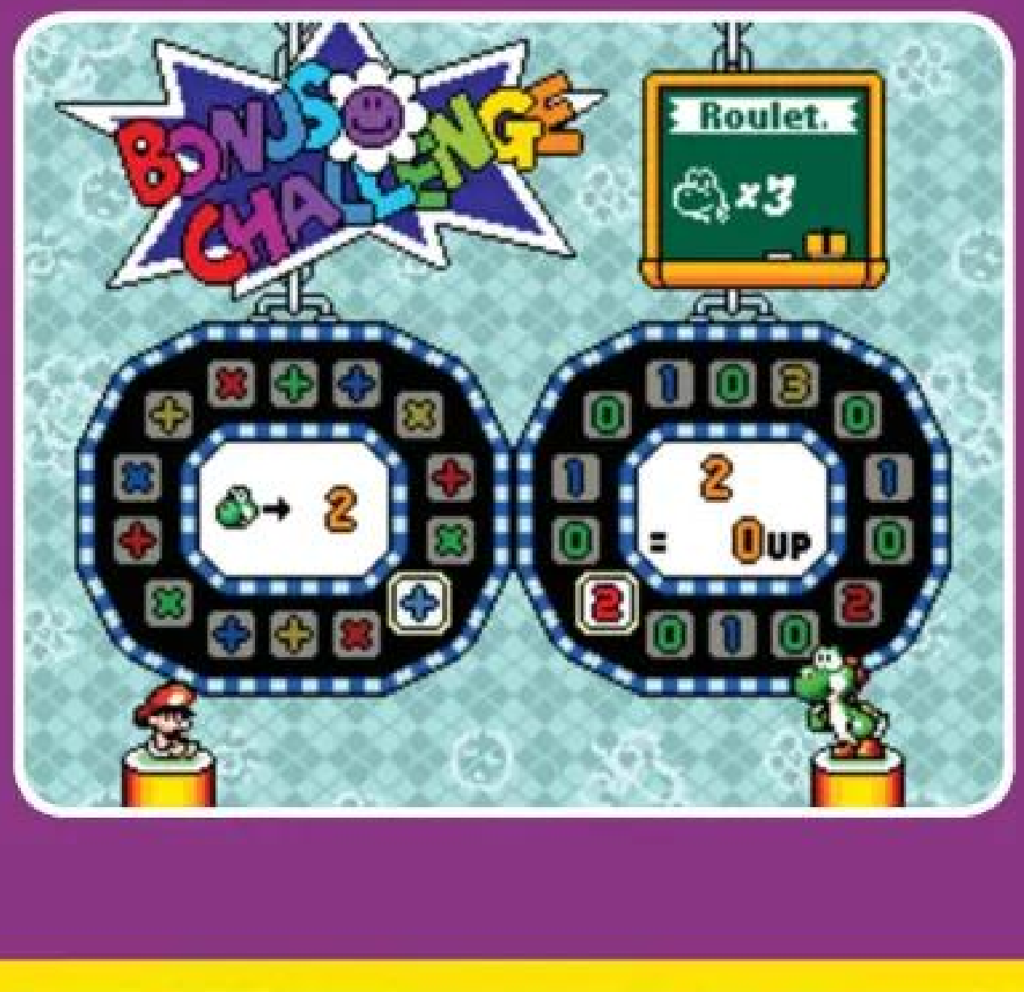


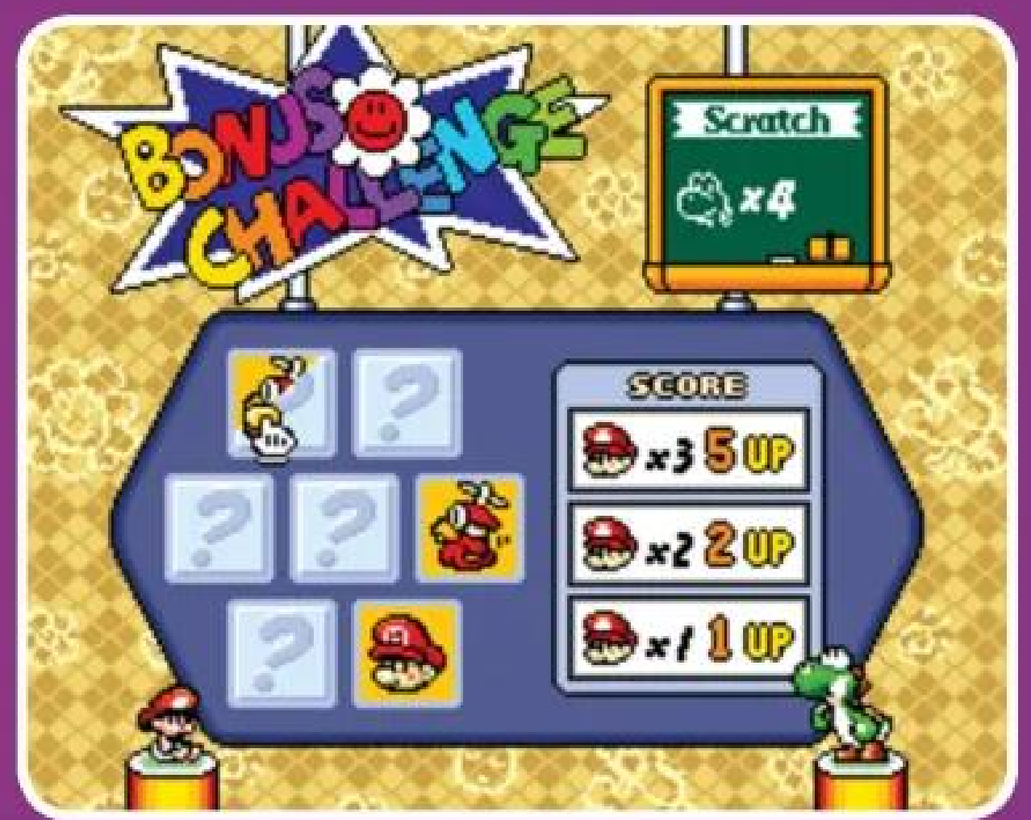
▲ MATCH CARDS

■ This is a simple game of pairs in which you can win items. You’ll need a good memory, since you’re only allowed to make one mistake.

▼ ROULETTE

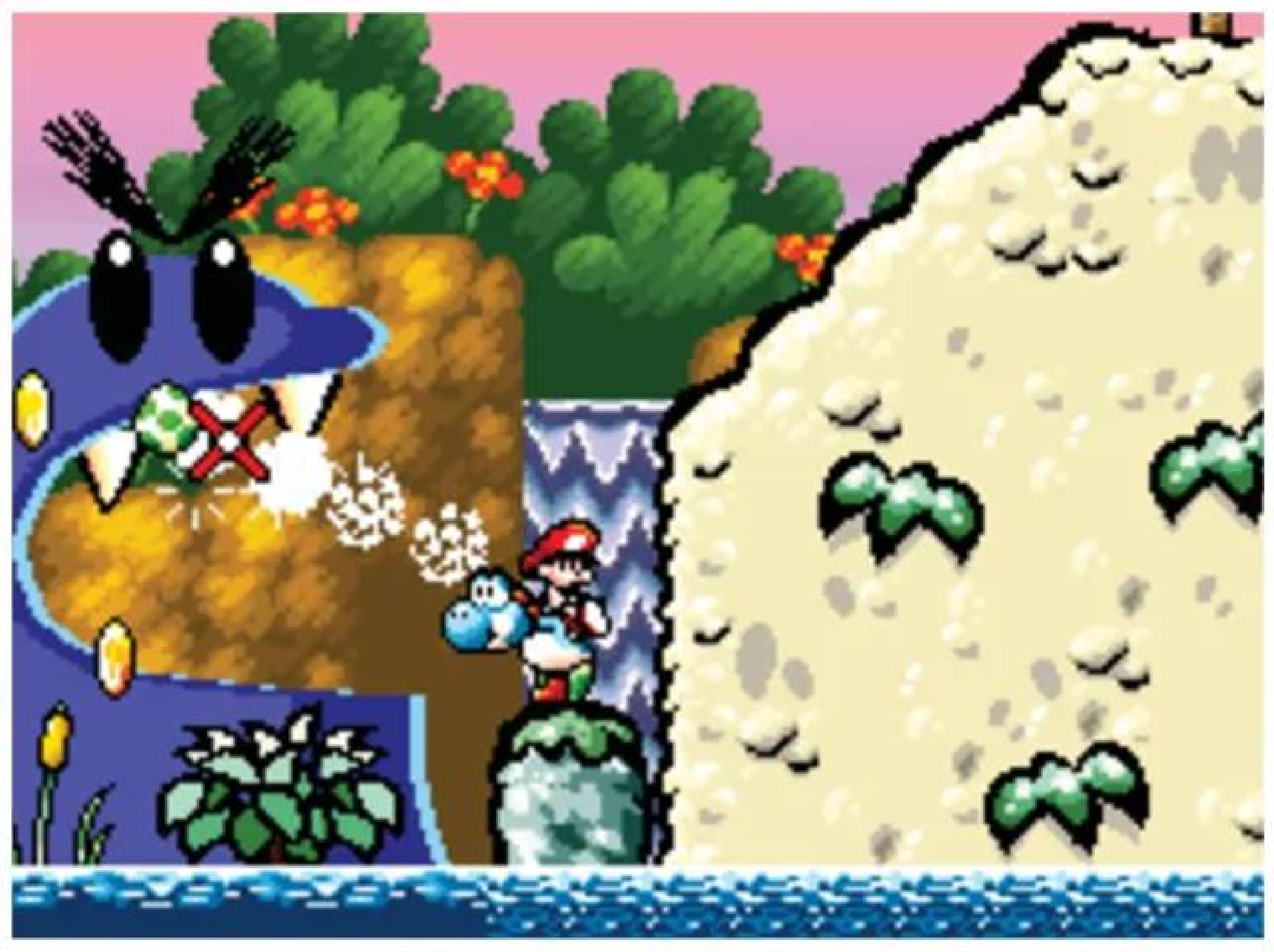
■ This one’s dangerous – you can wager lives in order to add extra lives, or even multiply your life total. You can triple it, but you might lose everything!





▲ SCRATCH & MATCH

■ It’s a scratchcard! The more Baby Marios you reveal, the more lives you get – one for one, two for two and five for three.



»You're not going to get past the massive Nep-Enut by jumping, so it's best to feed him an egg.

Yoshi's Island was released in August 1995 in Japan, and releases in North America and Europe followed in October 1995. The game received universal acclaim upon its release. *Nintendo Magazine System* gave it 97%, with Simon Clays commenting that it was "about the best game I've ever had the pleasure to play," with his only complaint being that the graphics were "slightly immature". Tony Mott awarded the game 94% for *Super Play* and praised it for its variety, noting that "You never know what's just around each corner, but you know that it'll be something worth seeing." However, he felt that the game's linear progression was disappointing by comparison to *Super Mario World's* wealth of secret exits and stages. *Edge*'s review scored the game 9/10, crediting the Super FX2 chip with "some wonderfully inventive touches which make each new level a reward to the player."

The game was later converted to Game Boy Advance as *Super Mario Advance 3: Yoshi's Island*, and that version has since been made available for 3DS and Wii U. Of course, despite Yoshi's solo success Mario was soon back on top. Although the developers felt that they'd pushed Mario to his 2D limit, new hardware meant that Nintendo had already figured out what to do with its headline star. Less than a year later, Mario returned in the groundbreaking *Super Mario 64*, which many of the *Yoshi's Island* staff also worked on. But as a swan song for an era in which 2D gaming was still the primary concern of the world's most prominent game developers, you couldn't ask for much better than *Yoshi's Island*. The game established Yoshi as a platform star in his own right and is still considered to be one of the greatest of all time, frequently showing up in lists of the best games ever, including Games™'s top 100 in 2010 and our own readers' top 150 in 2015.

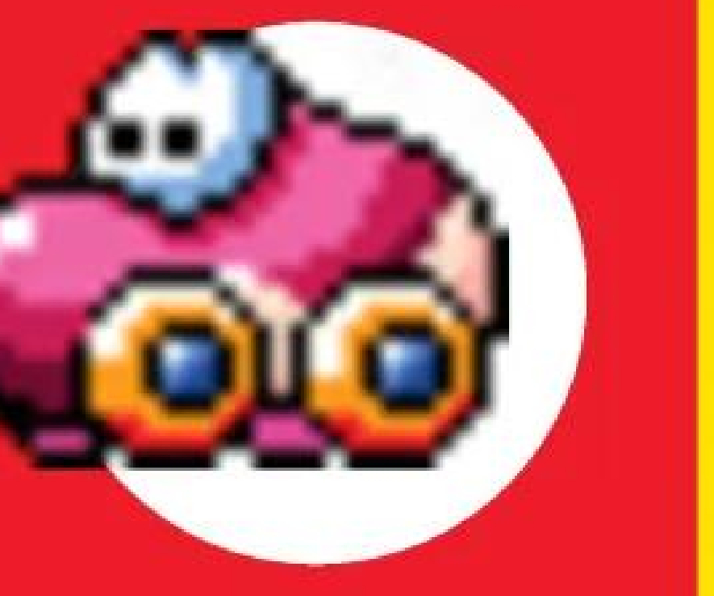
With that in mind, we'll leave the last word to the developers – why do they think that the game is still so beloved by players? "I think maybe it has something to do with the appeal of the gameplay; Yoshi offers this unique ability to gobble up enemies, turn them into eggs, and then throw those eggs," says Tezuka. "For the *Yoshi* series, we wanted to convey Yoshi's warmth of character. The adorable voice and our leaning towards hand-made visuals has all added up to create the character's uniqueness, and I think it's maybe these things that players are drawn to."

"It wasn't easy creating Yoshi or *Yoshi's Island*," says Hino. "We competed in the team to see what were the most amusing or fun things we could draw, and laughed together as we thought up strange enemies and level features, knowing we had a bit more freedom to do so because it wasn't a Mario game. Even the programmers jumped on board and worked really hard to achieve our ideas. I think the fondness people have for the character and the game is because we managed to give form to all this passion we had. A long time has passed since then, but even now designers continue to develop Yoshi with all kinds of different interpretations, such as handicrafts, worlds made of yarn and so on. I'm really happy to see people still continuing to enjoy playing with Yoshi." ✱

MORPHIN' TIME

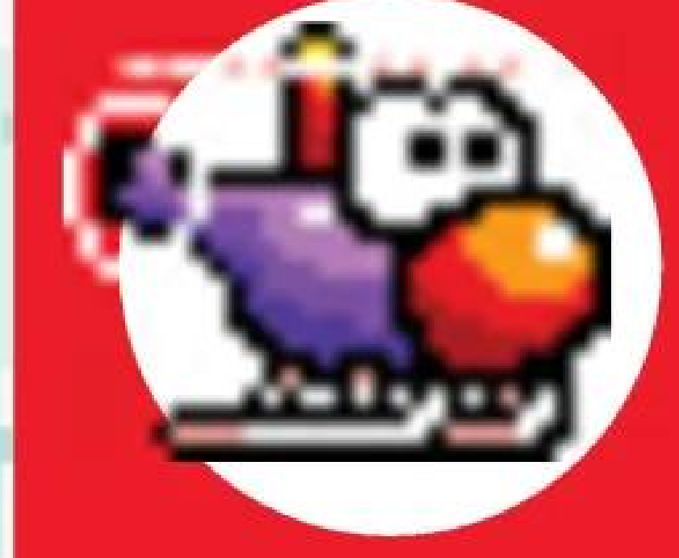
Yoshi can take five different forms after entering a Morph Bubble – but what do they all do?

CAR ▸



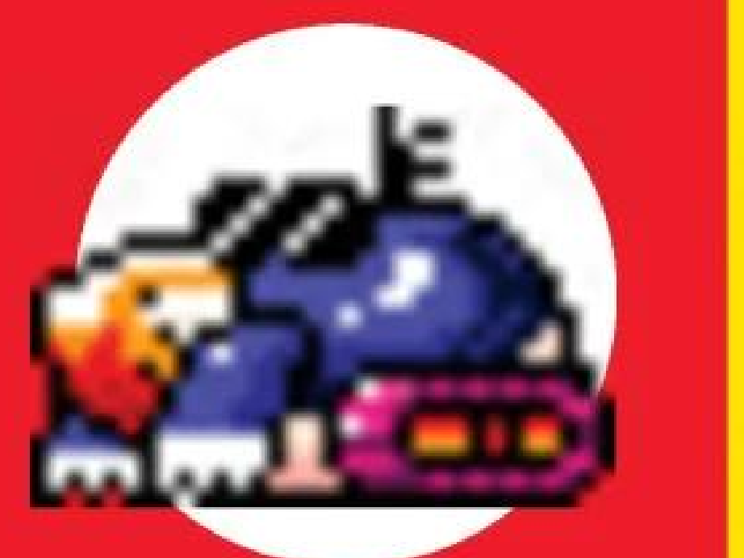
■ Four wheels are faster than two legs. In this form Yoshi can also dodge enemies and reach greater heights by adjusting his wheels' suspension.

◂ HELICOPTER



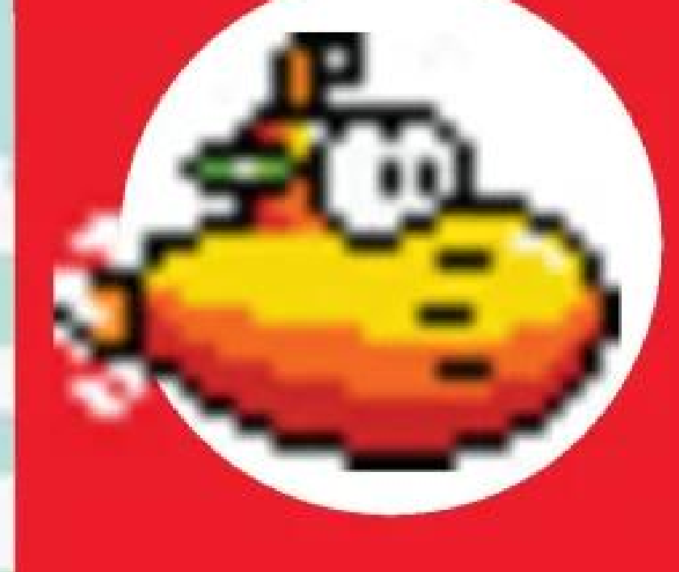
■ Who needs a blue winged Yoshi when you've got rotor blades? This form can fly freely through the air for a limited time, though you do need to beware of inertia.

MOLE TANK ▸



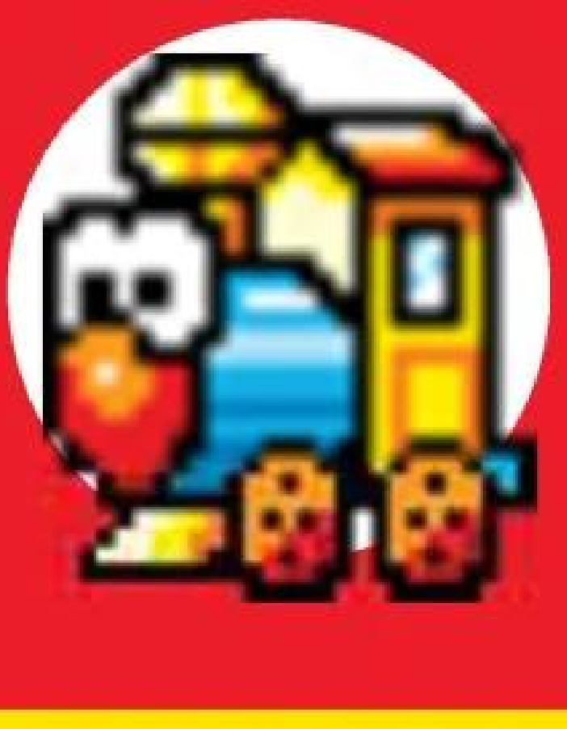
■ We really *dig* this particular transformation. [*Nick, please collect your P45 from reception – Ed.*] As you'd expect, it allows Yoshi to create tunnels.

◂ SUBMARINE



■ This one's a bit of a belter – not only does Yoshi get freedom of movement underwater, he also gets the ability to fire torpedoes at his enemies.

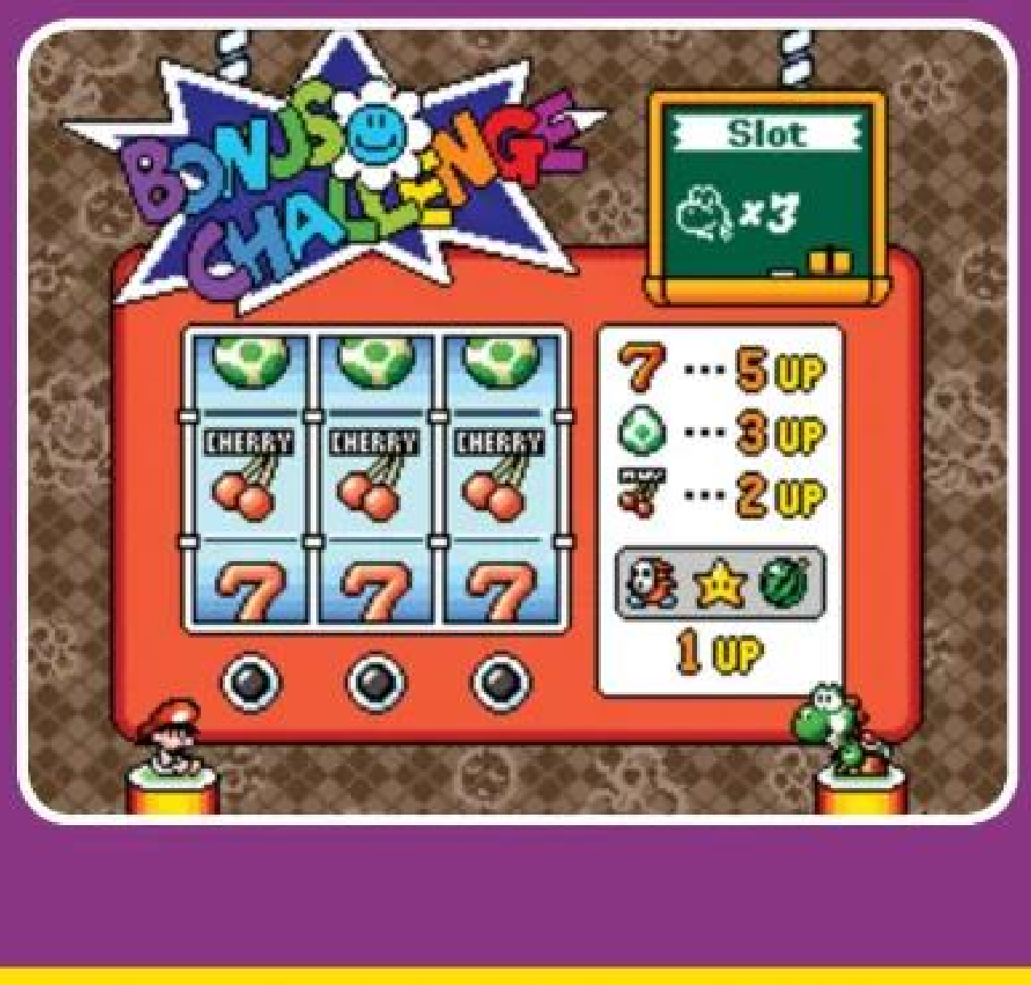
TRAIN ▸

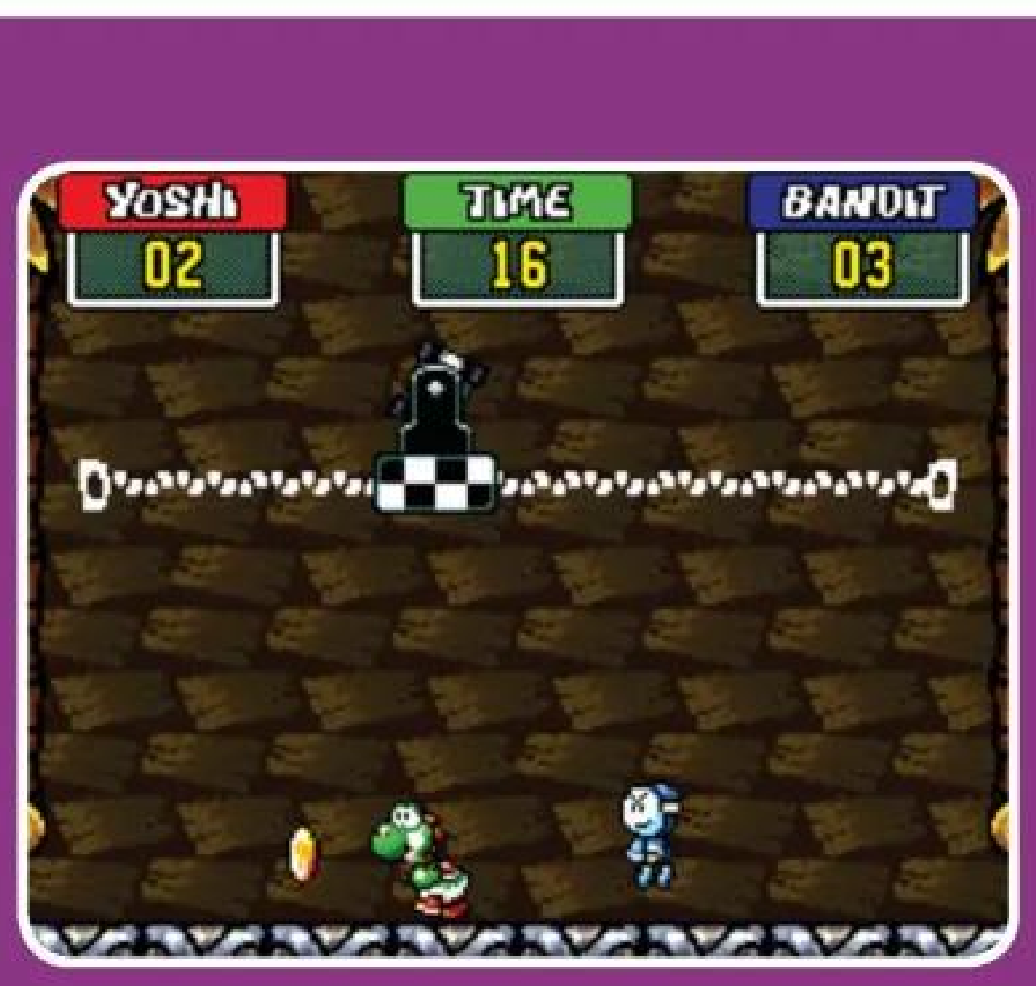


■ Becoming a train allows Yoshi to travel along tracks. Thankfully realism is left to one side, so it doesn't cost him all his coins and he's never replaced by a bus.

▾ SLOT MACHINE

■ This fruit machine will give you extra lives if you can match the symbols on the reels. You don't even need to pay 10p to play – bargain.



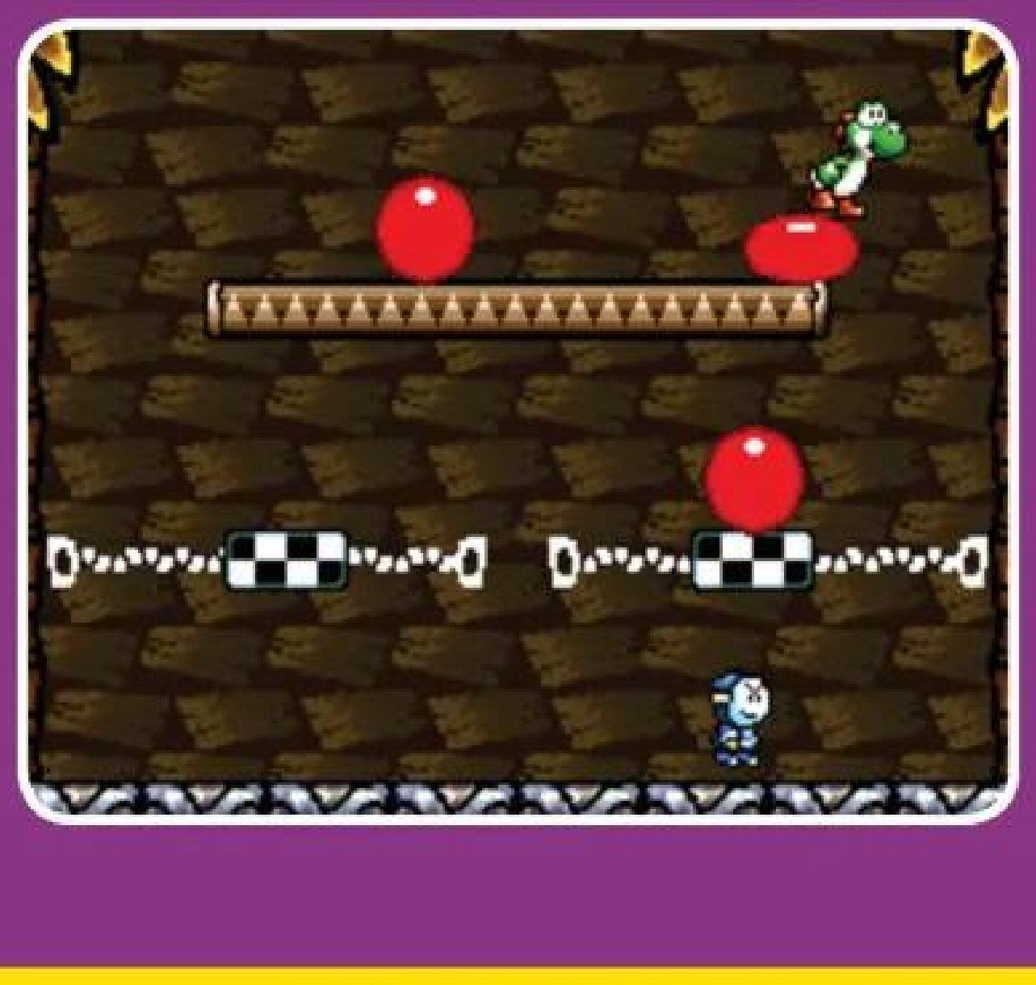


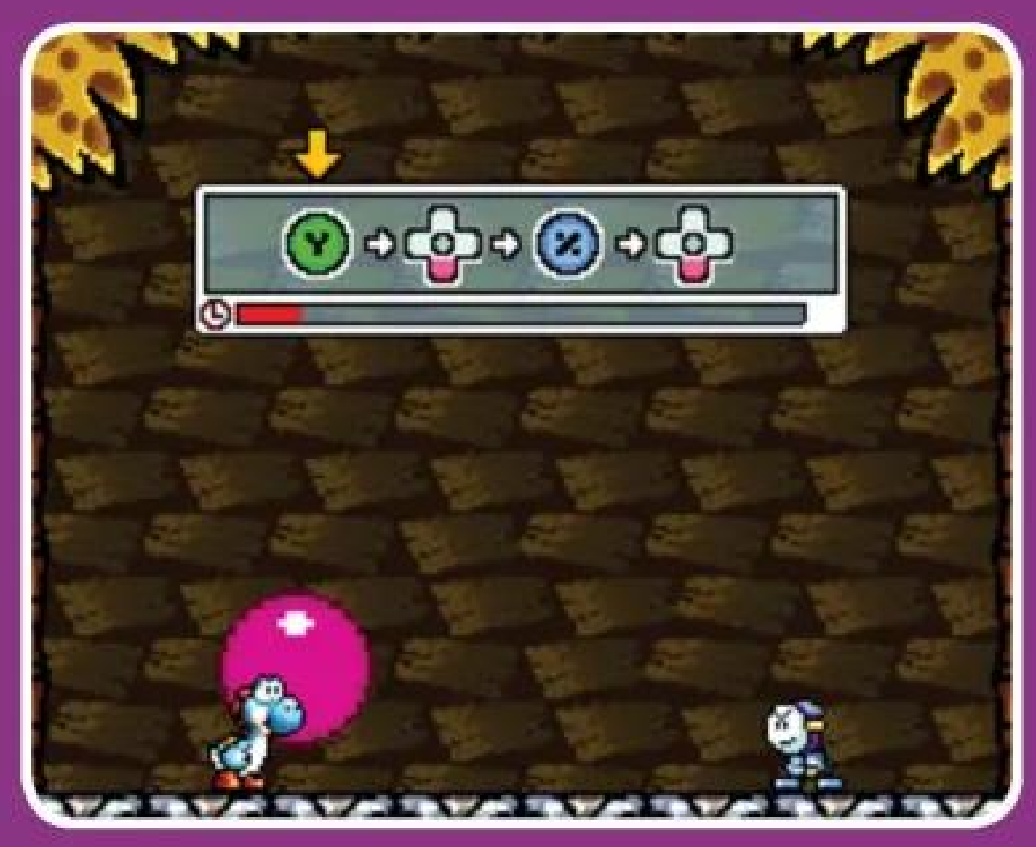
▴ GATHER COINS

■ Coins are fired out of a cannon high above the arena, and it's your job to collect them. You can jump on your opponent to hinder them, too.

▾ POPPING BALLOONS

■. Your job is to pop these baloons to try to find a hidden item before your opponent does.



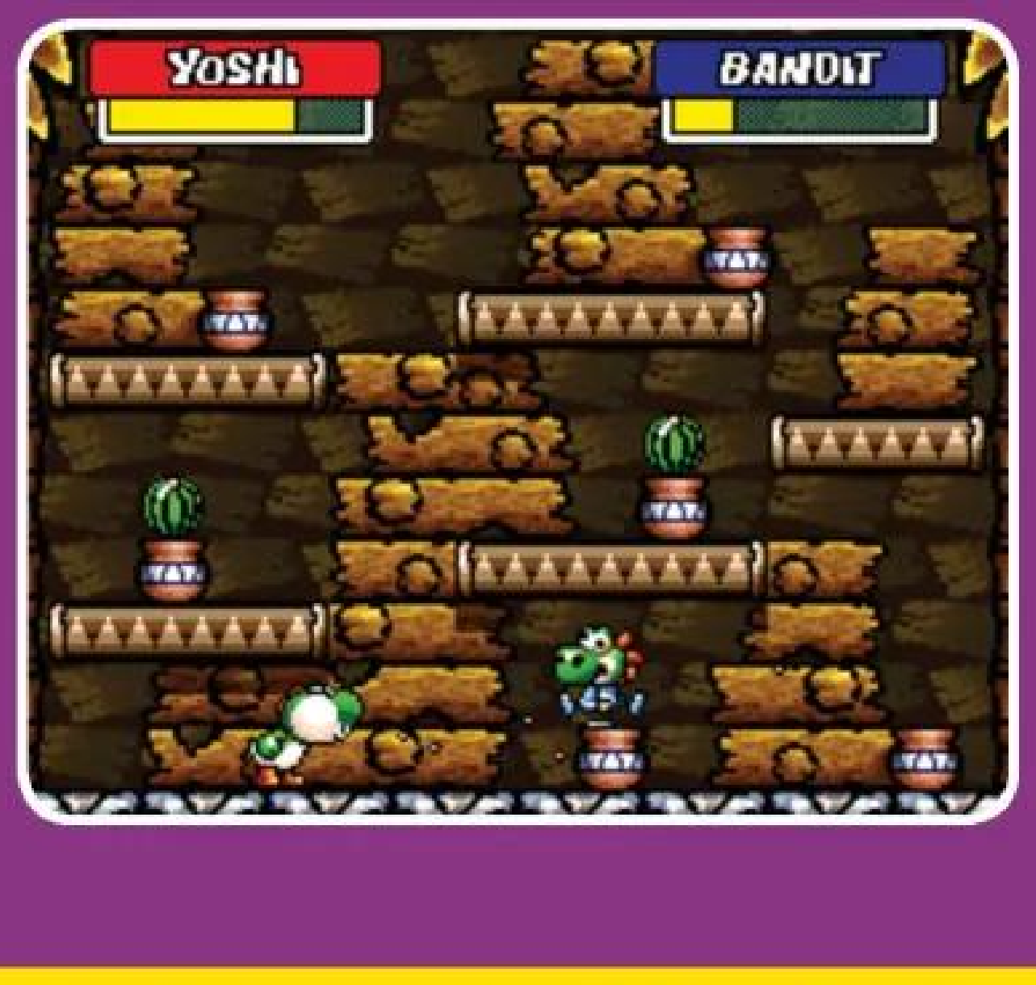


▴ THROWING BALLOONS

■ Input button commands to throw a water balloon at your enemy. If it pops in your hands, you lose!

▾ WATERMELON SEED SPITTING CONTEST

■ Battle against a foe by shooting watermelon seeds at them.

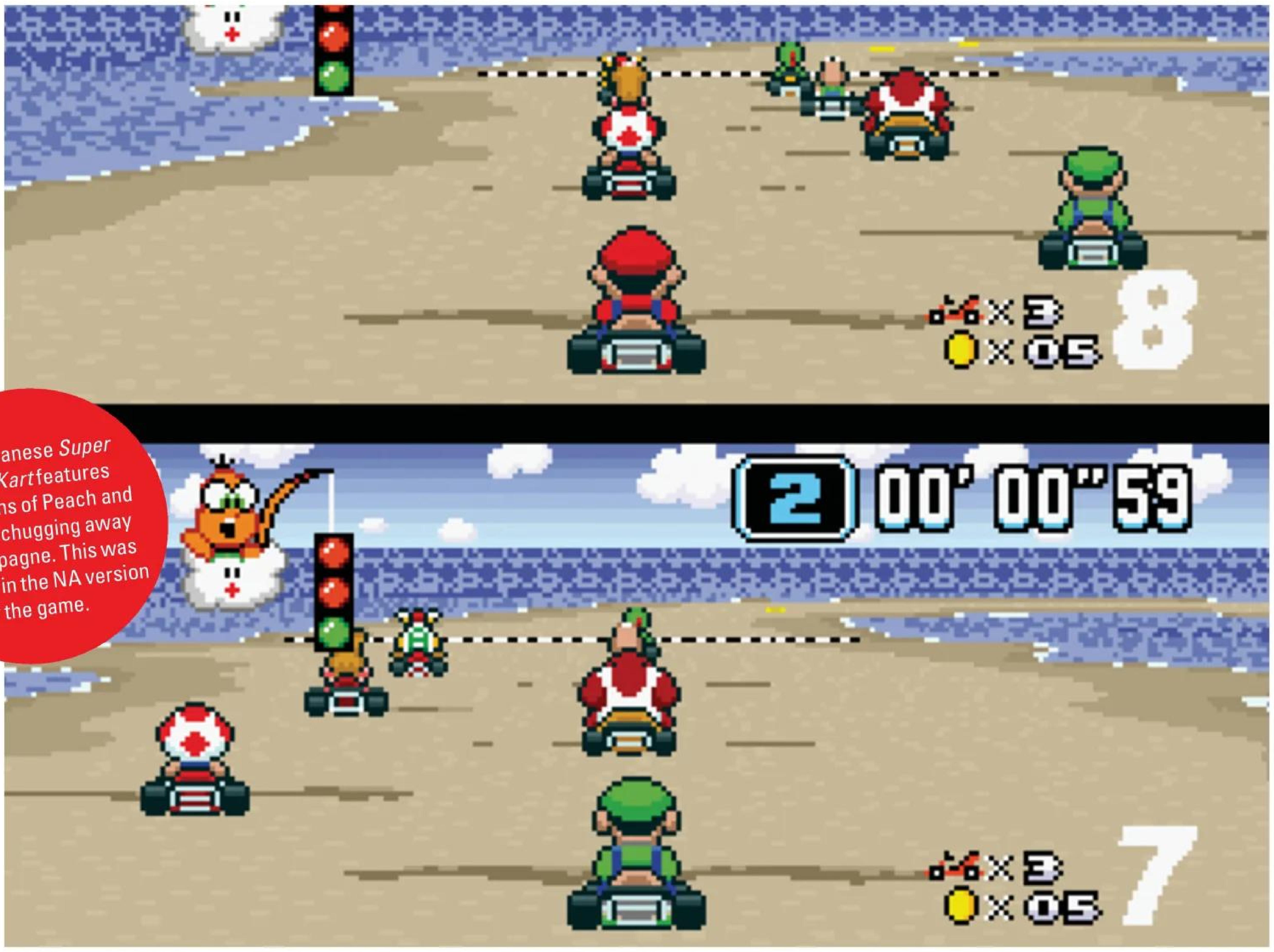


GAME CHANGERS

SUPER MARIO KART

RELEASED: 1992 **PUBLISHER:** NINTENDO **DEVELOPER:** NINTENDO EAD **SYSTEM:** SNES

The SNES' most famous racer wasn't meant to be a Mario game when it was first being developed, but when the programmers decided to shift their efforts to a Mario Kart game, they never knew they'd change gaming forever



The Japanese *Super Mario Kart* features animations of Peach and Bowser chugging away at champagne. This was removed in the NA version of the game.

***Super Mario Kart* is widely acknowledged as the game that started an entire genre – without it, we wouldn't have the mascot kart racing games we know and love today.** As with the majority of other Nintendo games, *Super Mario Kart* was a trailblazer – a game that inspired many clones and imitators, but no one could live up to the incredible formula that Nintendo worked into the game, creating something that was incredibly accessible to players of all ages, but still incredibly deep, once you lifted the hood and understood how the game actually worked.

Less than two years after *Super Mario Kart*'s release, long-time Mario rival Sonic released his own kart game (*Sonic Drift*), followed by Ubisoft's *Street Racer* on the SNES in 1994. The impact of the game's release was tangible on the whole industry – it created the genre, that's a given, but it also proved that games and their characters were never limited to just one game style. *Super Mario Kart* was the first time we saw Mario characters outside a platform game setting, and their collective transition to this new realm was groundbreaking at the time.

But the game didn't start development as a game that would star Mario – rather, it was originally planned as a multiplayer sequel to *F-Zero*. The karts were populated with a generic man in overalls as placeholder art. When the team at Nintendo EAD was designing the sprites, they collectively decided that a character in a kart should be three 'heads' high – that way, you identify each racer and their kart easily enough, without too much strain. It was only about three months into development that Nintendo decided to make the whole game a Mario-focused racer.

THE ANATOMY OF SUPER MARIO KART

SUPER MARIO KART HAS GONE ON TO INSPIRE A SLEW OF OTHER GAMES, BUT WHAT CAME TO INSPIRE THE NINTENDO DEVS BEHIND THE KART RACER IN THE FIRST PLACE?

F-ZERO

★ Nintendo wanted to make *Mario Kart* in order to stand alongside the single-player focused *F-Zero*, so that the console had broader appeal.

MARIO

★ Originally, a 'man in overalls' replaced Mario as kart driver, but this was changed when the dev team decided to test what it would look like having Mario in the game.

JAPANESE FOLKLORE

★ The 'thwomps' in *Mario Kart* are based on the 'nurikabe' in Japanese folklore: ugly, square spirits that take the form of walls to impede progress.

The general idea with the development of *Super Mario Kart* was to create a game that directly contrasted with the aforementioned SNES launch title *F-Zero* – a single-player only game with intricate tracks and elaborate mechanics. That way, the Nintendo console would have something for the lone-wolf racers out there, and something for the families and multiplayer-focused groups of gamers, too.

It was the multiplayer functionality of the game that got most people's attention when the game launched – it was a true party game on the home consoles, and one of the first to really hit that friendly/competitive nail on the head. This gameplay was no accident: Nintendo and Miyamoto actively set out to make a game capable of displaying two players on the same game screen simultaneously – something evident in the way single-player games are still split across the screen horizontally.

> **"The game was as pick-up-and-play as you could get – it was easy to learn, difficult to master"**

Because of the multiplayer focus, tracks and levels couldn't be as complex as the zones you'd find in *F-Zero*, but that actually ended up working in *Mario Kart*'s favour: the simplicity of the tracks meant the game was as pick-up-and-play as you could get – easy to learn, difficult to master. But within that simple formula, there are smaller ways Nintendo plays with the layout: between small shortcuts, zany power-ups and track-based boosts, very few races played out the same. At first look, each track was just a circuit with a finish line, but the more you play, the more you understand how the visual language of the track is actually pointing you at a certain shortcut or hidden feature. This played into the longevity of the game, and is largely the reason you still see tournaments of players competing in the game's time trial mode.

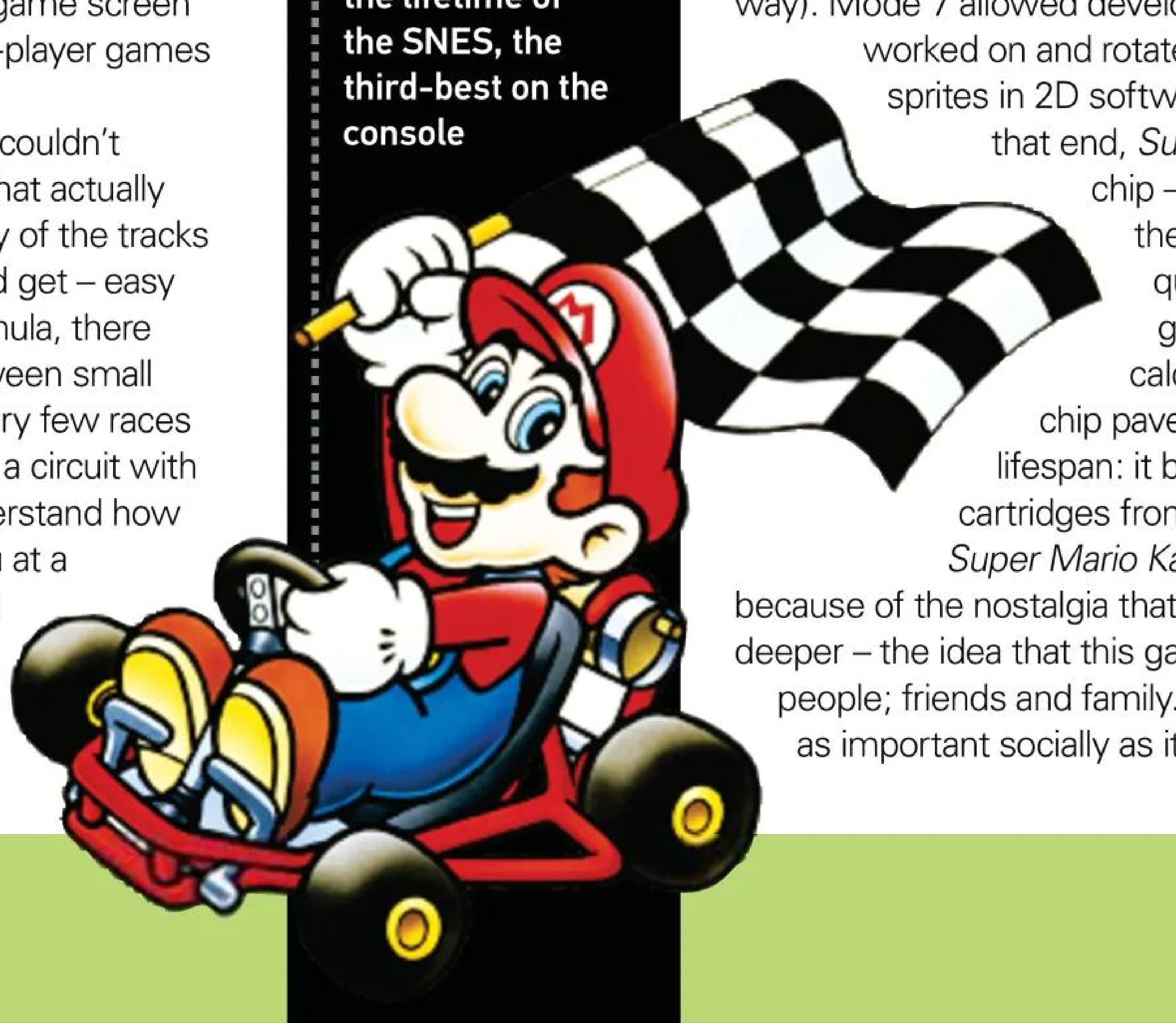
KEY FACTS

- **Each character 'sprite' is actually rendered from 16 different angles, impressively giving that 3D illusion on a 2D plane**
- ***Super Mario Kart* is the first non-platform game to feature *Mario* characters**
- ***Super Mario Kart* managed to hit nine million sales during the lifetime of the SNES, the third-best on the console**

CONGRATULATIONS

EXCELLENT DRIVING!
YOU ARE NOW A SUPER
MARIO KART EXPERT.

» The winner's podium is always hotly contested.



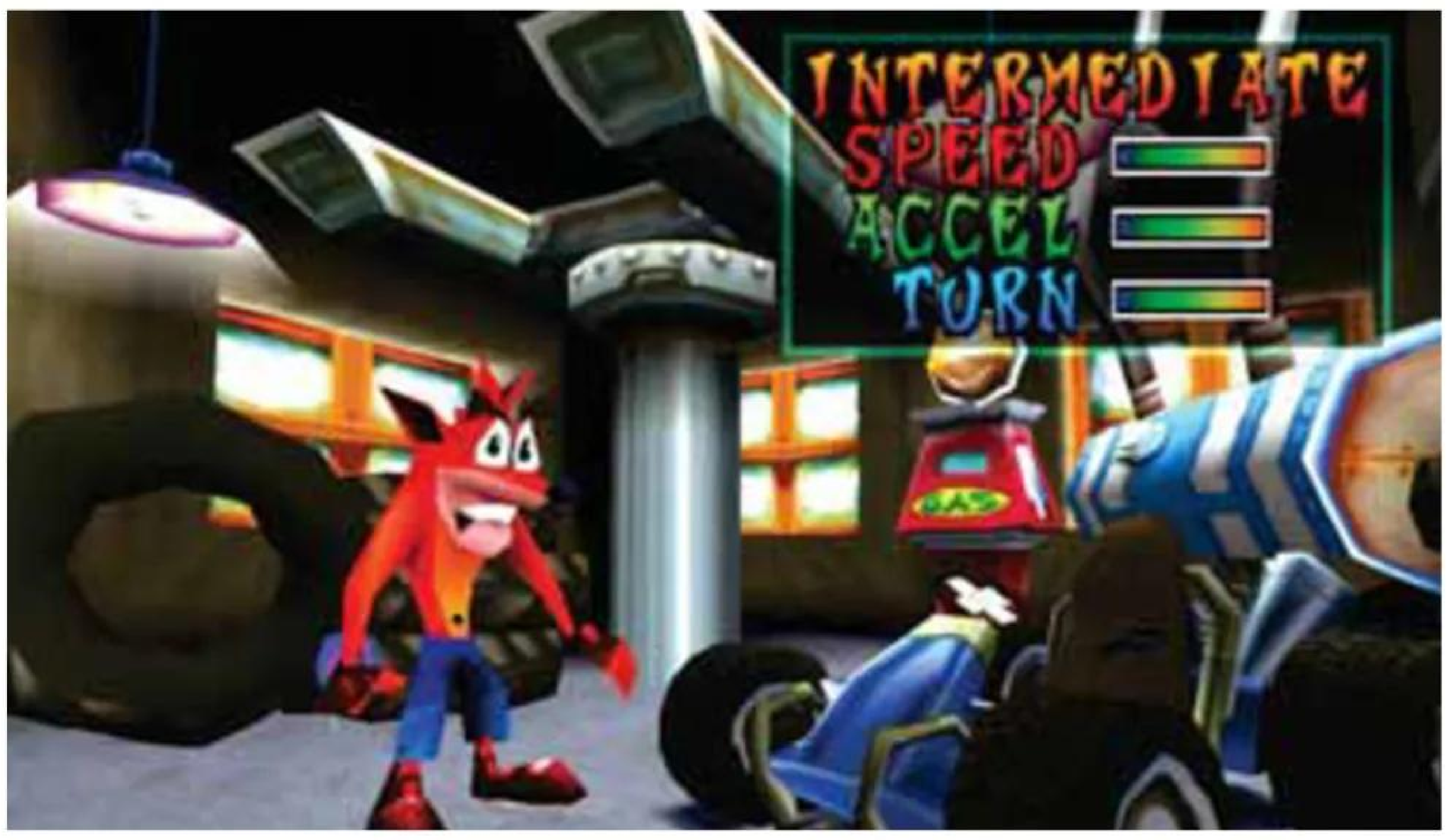
The game also made the most of Nintendo's internally-developed Mode 7 texture wrapping – a technical marvel that made *Super Mario Kart* one of the best-looking games on the SNES (by a long way). Mode 7 allowed developers to select planes that were being worked on and rotate them freely, basically making 3D sprites in 2D software (or, at least, giving that illusion). To that end, *Super Mario Kart* introduced the DSP-1 chip – that's Digital Signal Processor – into the cartridge, which allowed easier and quicker 3D mathematics from the game's engine, courtesy of floating point calculations. The implementation of this chip paved the way for the rest of the SNES' lifespan: it became the most popular chip in SNES cartridges from then on.

Super Mario Kart has a place in many people's hearts because of the nostalgia that it evokes.It also pulls on something deeper – the idea that this game was mostly enjoyed by groups of people; friends and family. It's a game that – to some circles – is as important socially as it is culturally. ✱

GAME CHANGERS

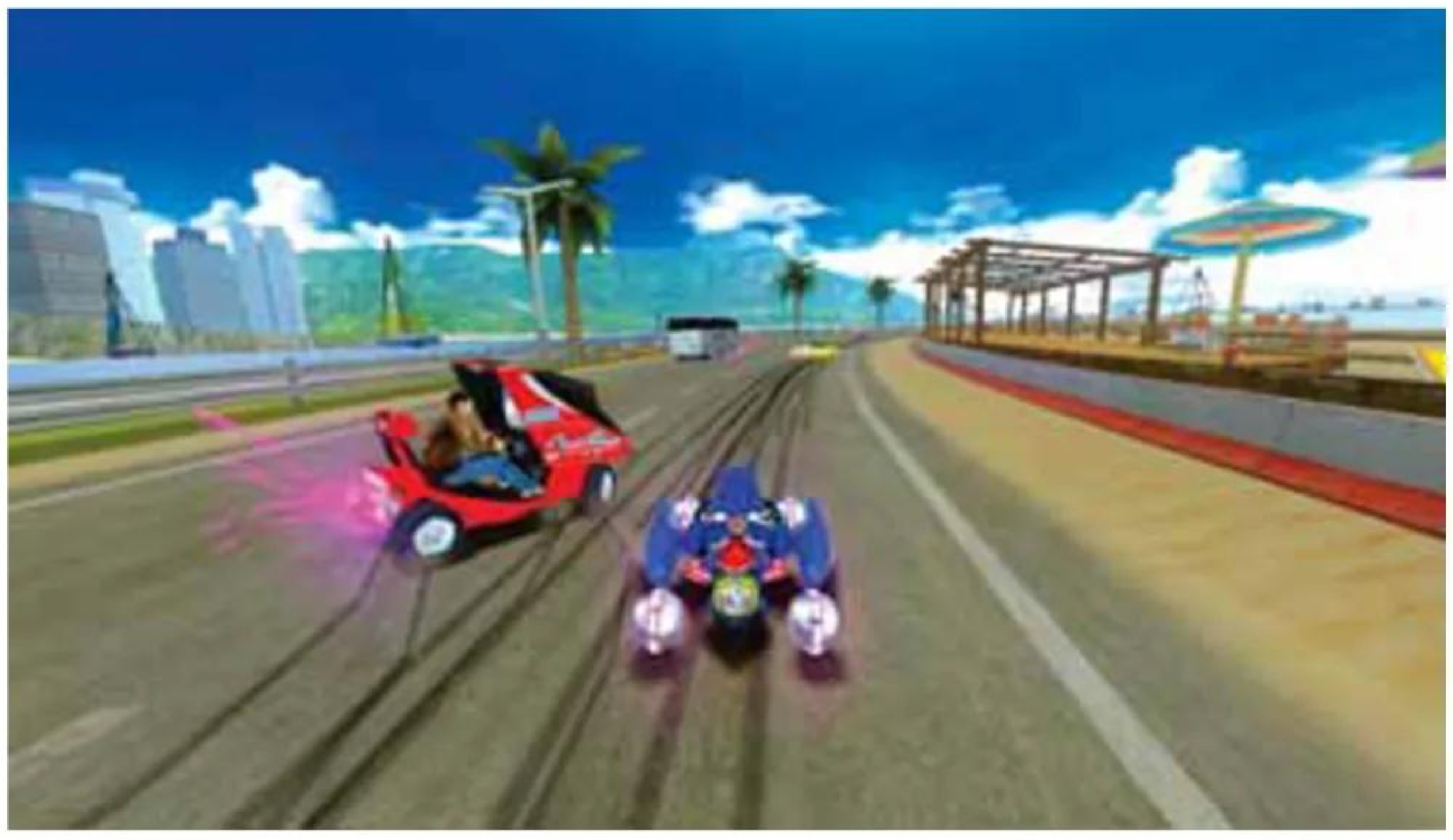
8 OTHER GAMES INSPIRED BY MARIO KART

Super Mario Kart was the first kart game to hit our consoles, but it wasn't the last. The game's release heralded the start of a new genre, and other developers vied for their chances on kart-racing throne



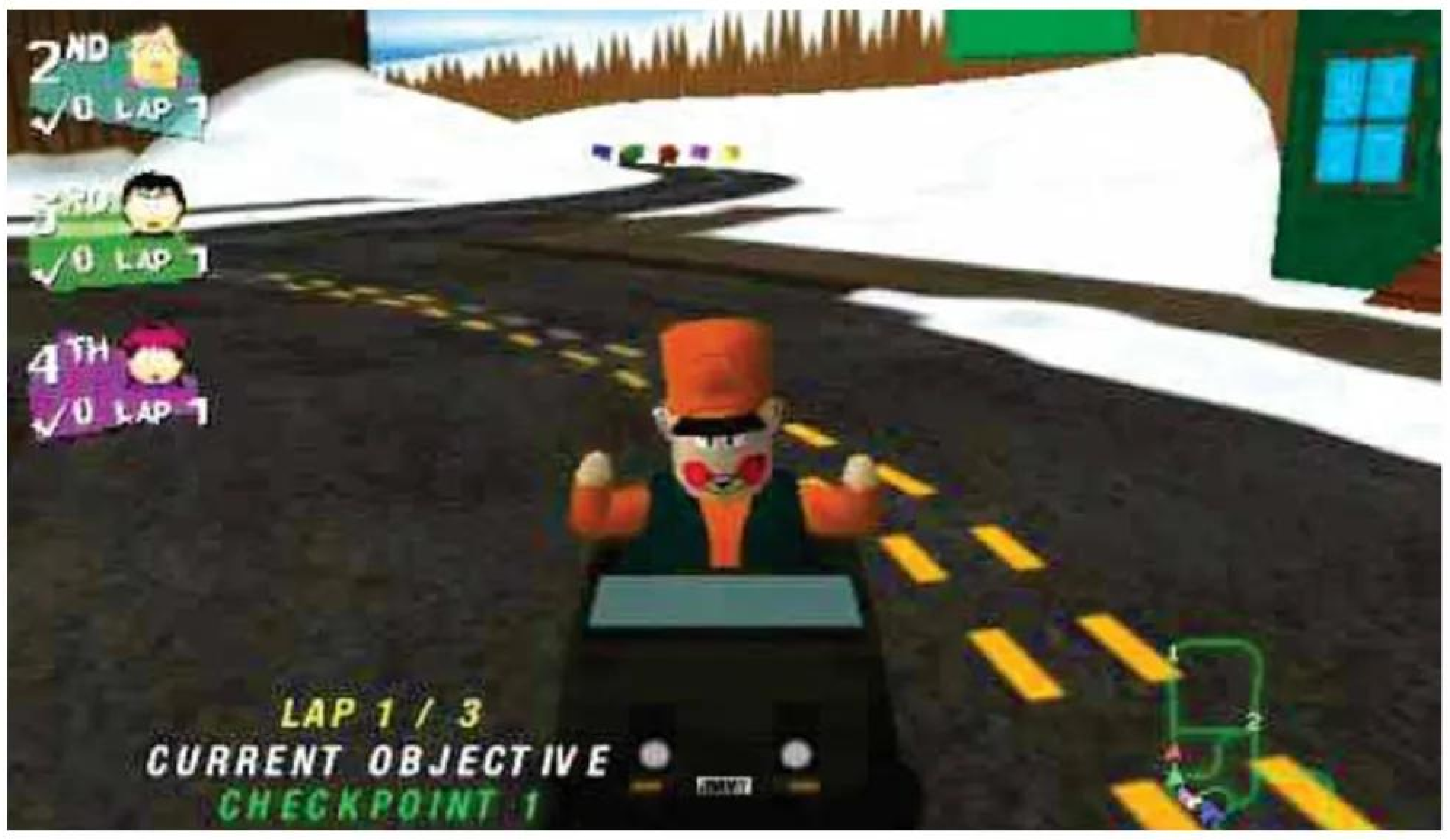
CRASH TEAM RACING

■ The final *Crash* game by Naughty Dog was designed with the same focus on replayability and metagame as *Crash 3: Warped*. Developers slotted design pillars into the kart-racing genre instead. It was a well-regarded *Mario Kart* clone and was recently remade along with its two sequels.



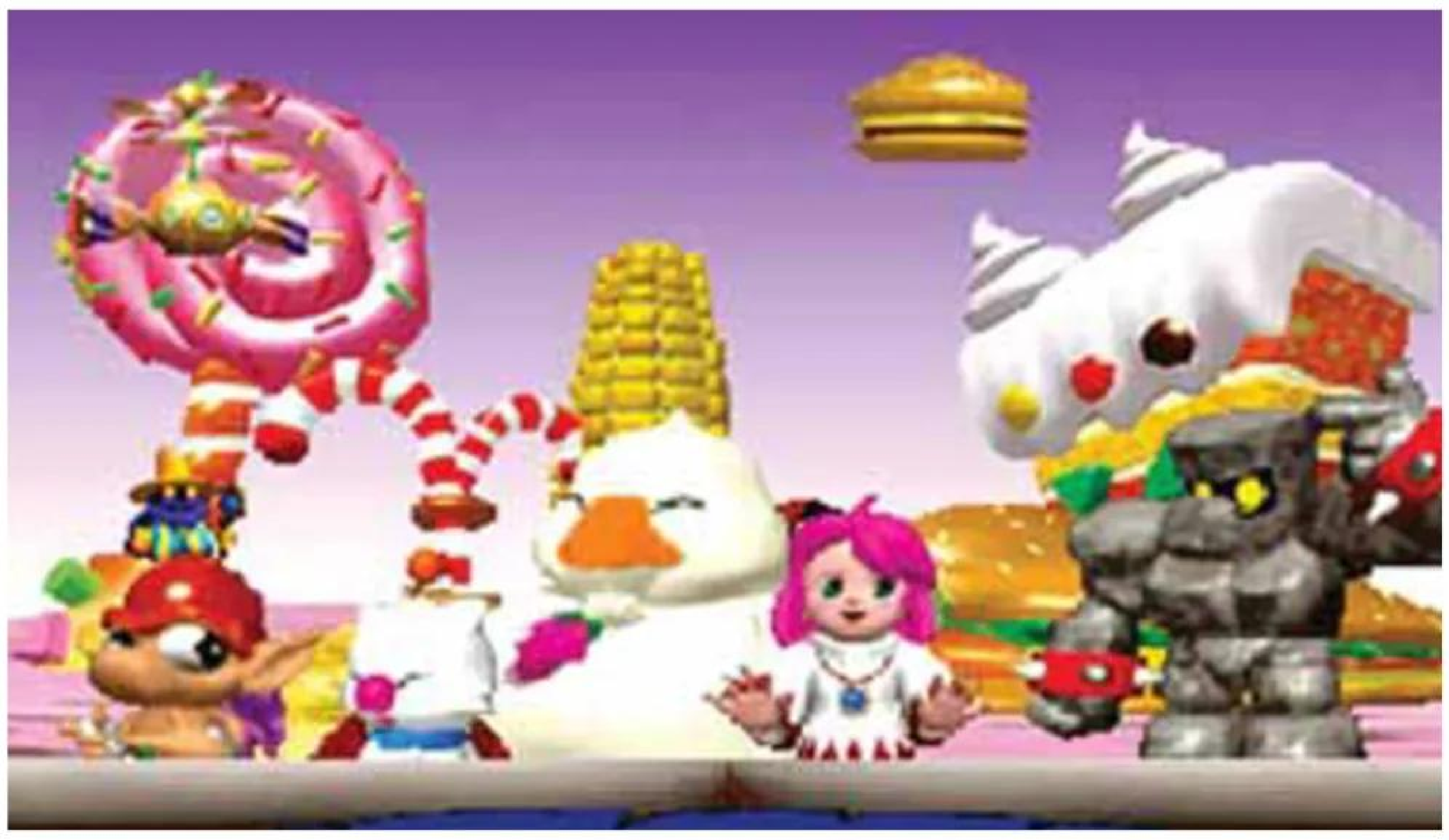
SONIC & SEGA ALL-STARS RACING

■ *All-Stars Racing* doesn't reinvent the wheel, but everything it does, it does well. Track design is multi-faceted and entertaining, complex but not confusing, and represents the height of what a kart racer can do. A sequel, *Sonic & All-Stars Racing Transformed* arrived in 2012 and added impressive evolving tracks.



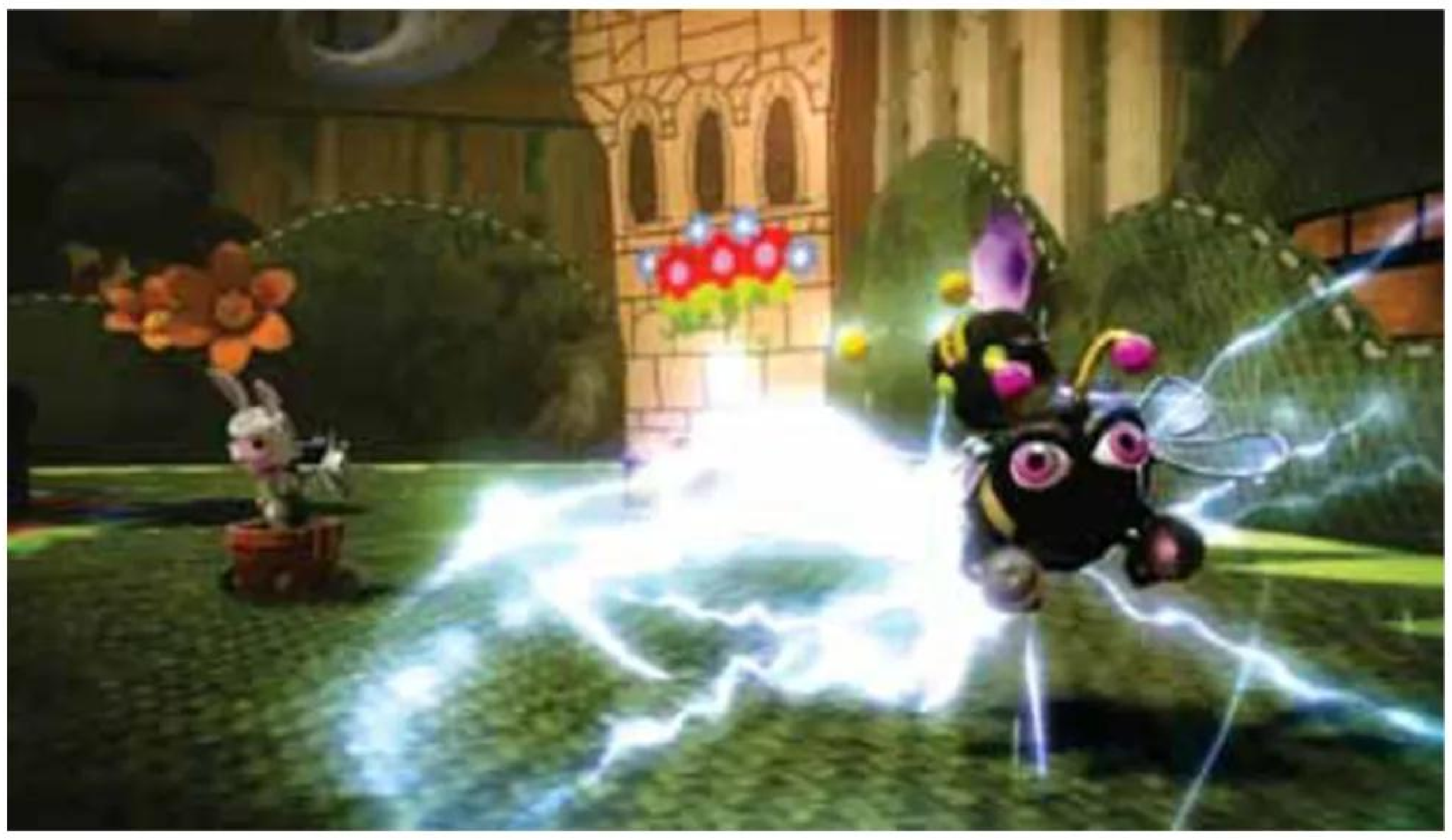
SOUTH PARK RALLY

■ Despite the lack of involvement from Trey Parker and Matt Stone (and their criticism of the *South Park* games that Acclaim published), we had a soft spot for *South Park Rally.* It was a clunky and floaty mess, but as a mascot kart racer, it was fun, fast, full of fan service and had a multiplayer that actually worked.



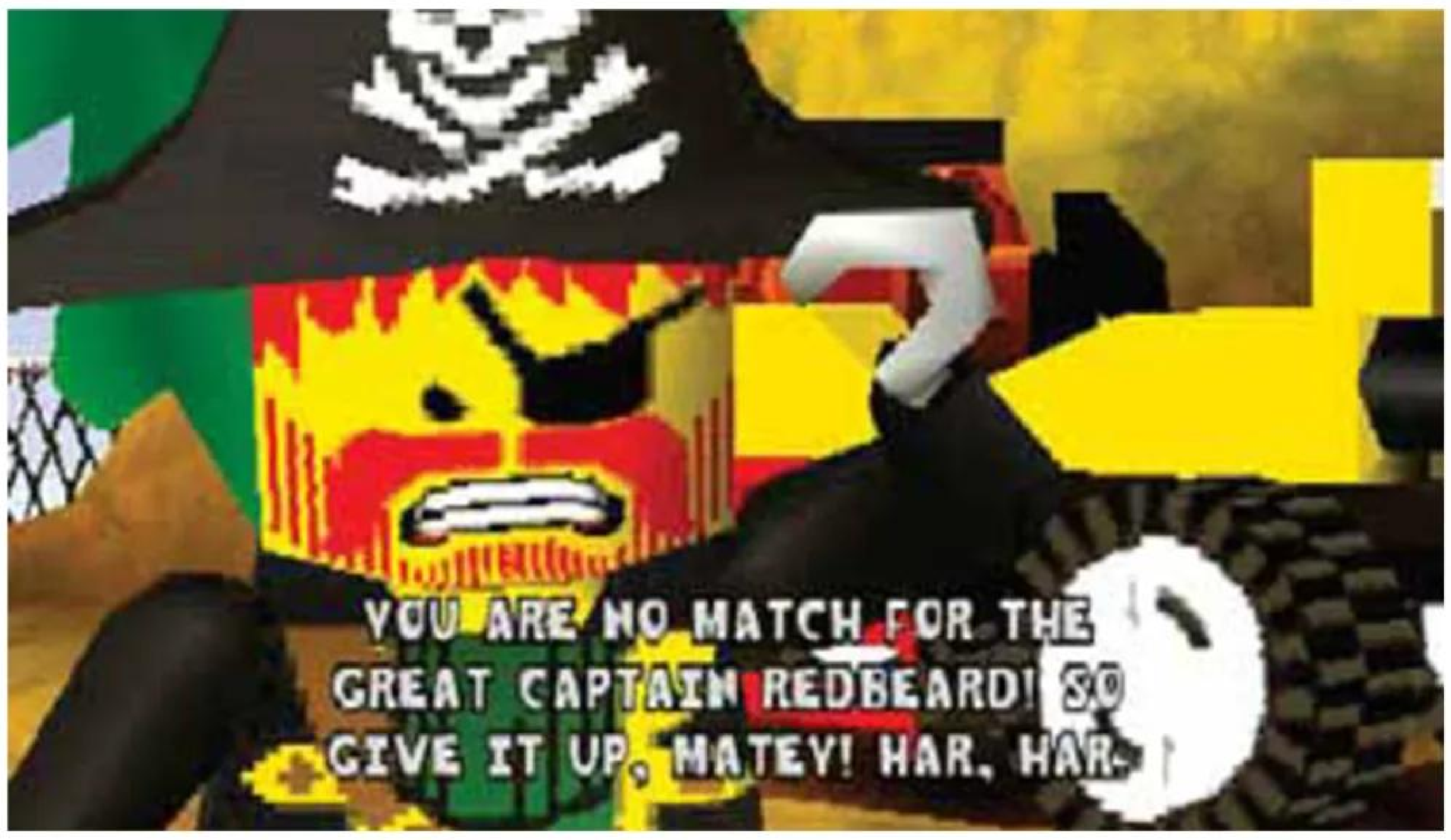
CHOCOBO RACING

■ *Chocobo Racing* is the closest you're going to get to a *Final Fantasy* kart game, compiling characters, locations and items from *Final Fantasy* to *Final Fantasy VIII.* SquareSoft attempted to cash-in on the kart craze that permeated the industry: tracks were lazy, controls loose and unsatisfying, and it was very, very easy.



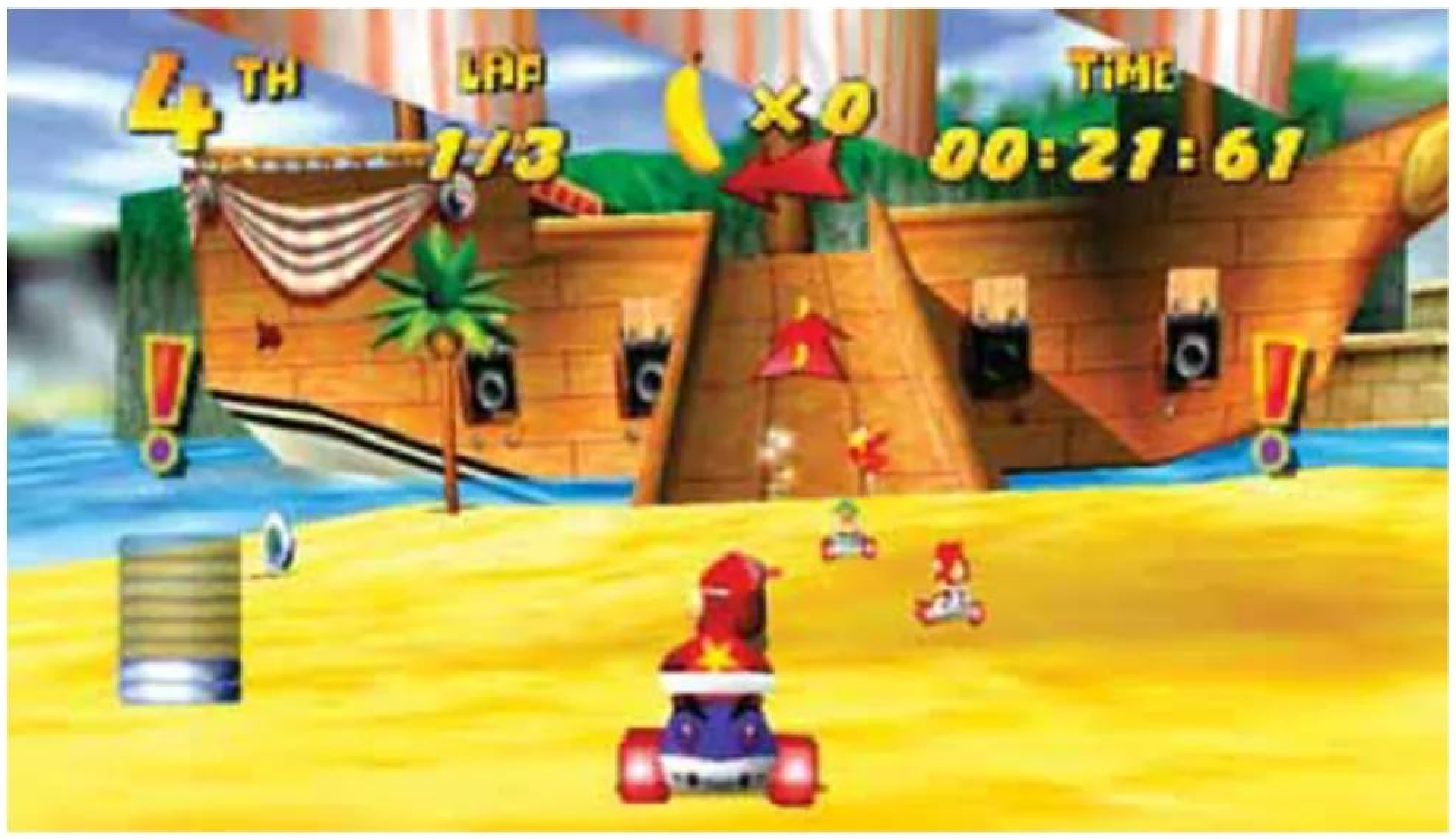
LITTLEBIGPLANET KARTING

■ *LittleBigPlanet Karting* felt more like a game from the parent series than a pure kart game, as the main reason for its release was to get players making their own tracks, based on a template laid out in it, and in *ModNation Racers* before. The game never felt like a true craft-em-up, nor a true kart racer.


YOU ARE NO MATCH FOR THE GREAT CAPTAIN REDBEARD! SO GIVE IT UP, MATEY! HAR, HAR

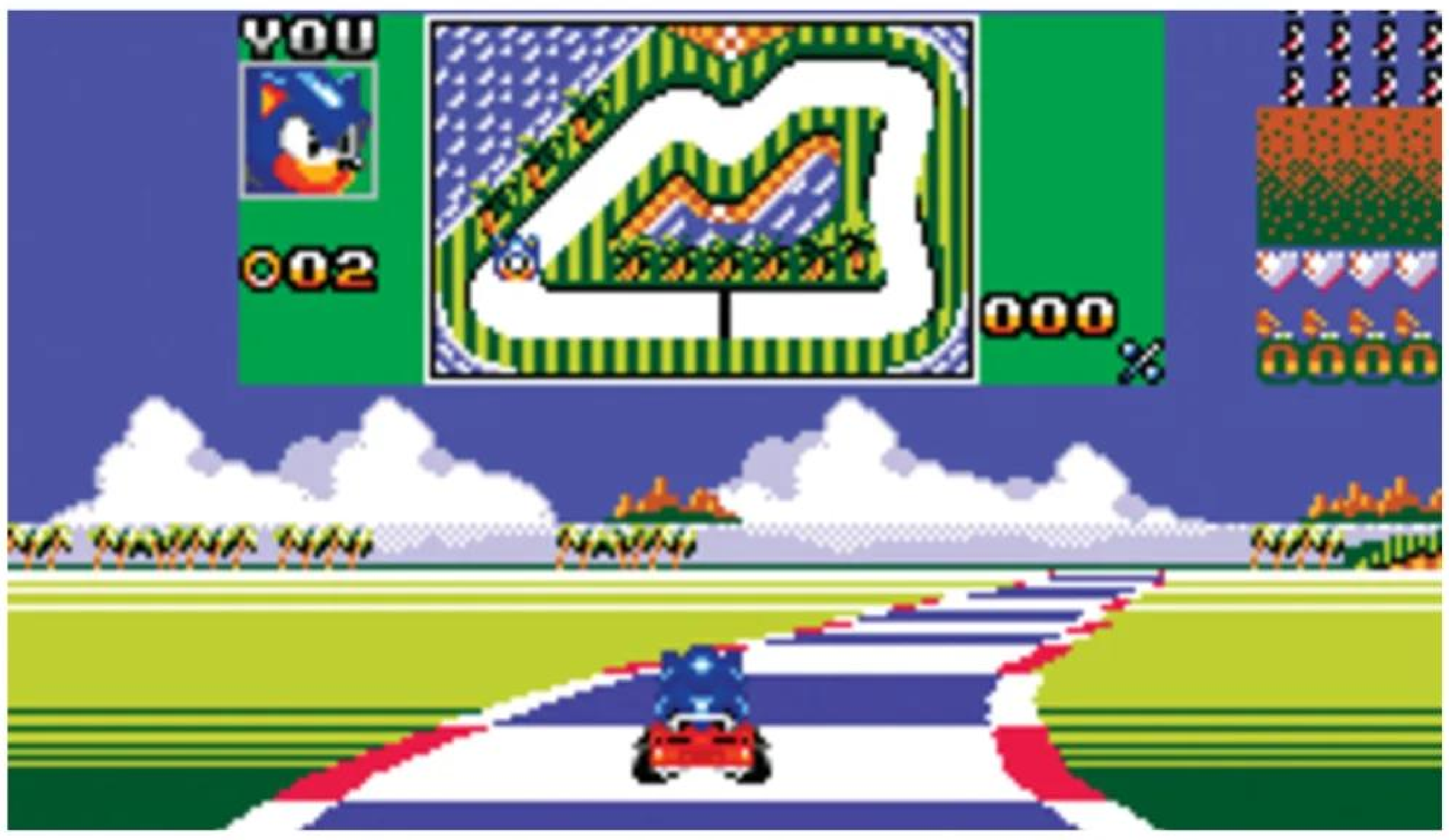
LEGO RACERS

■ The bright, colourful and clean graphical presentation of the first Lego racing game was impressive, as were the world design and track design, but the rudimentary physics engine in the game was where it shone: the car would handle differently, making for a game that was ostensibly fun and experimental.



DIDDY KONG RACING

■ Despite the well-animated characters, vibrant colour palette and fast-action racing, *Diddy Kong Racing's* multiplayer modes and the replay value were poor. The game had an excellent Adventure mode and excelled when it came to the subtlety in the mechanics – more so than its Nintendo predecessor, *Mario Kart 64.*

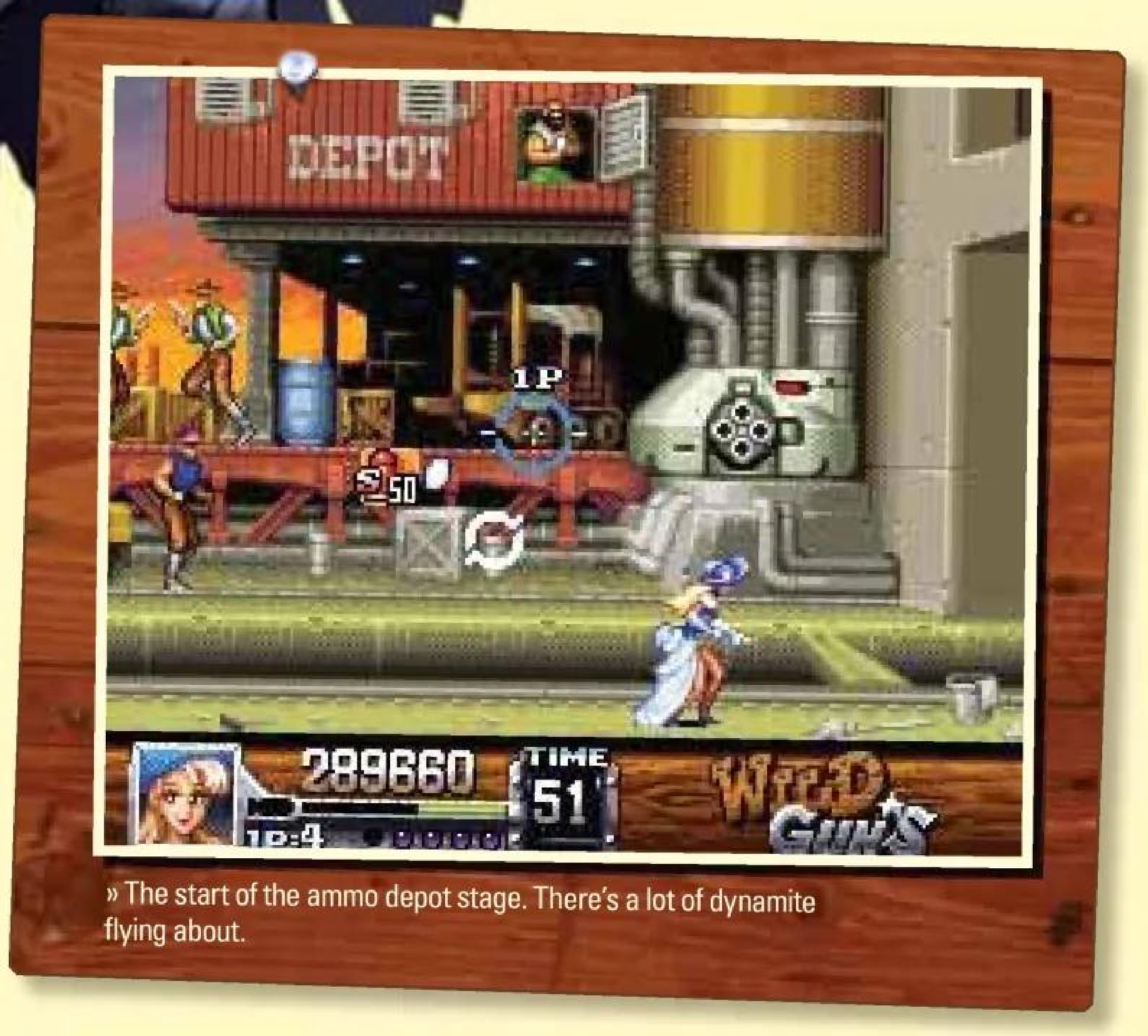


SONIC DRIFT

■ Released on the Game Gear, *Sonic Drift* was a lazy and cynical cash-in on *Mario Kart* – a game that didn't seem to understand what made *Super Mario Kart* so successful. Few options, four playable racers and bland track designs meant *Sonic Drift* never really had a chance at competing with *Super Mario Kart.*

WILD GUNS

In an alternative universe, the West was won by battling a giant green-eyed robot from the rooftop of a saloon. Retro Gamer looks behind the scenes of the recently reloaded cult SNES shooter Wild Guns



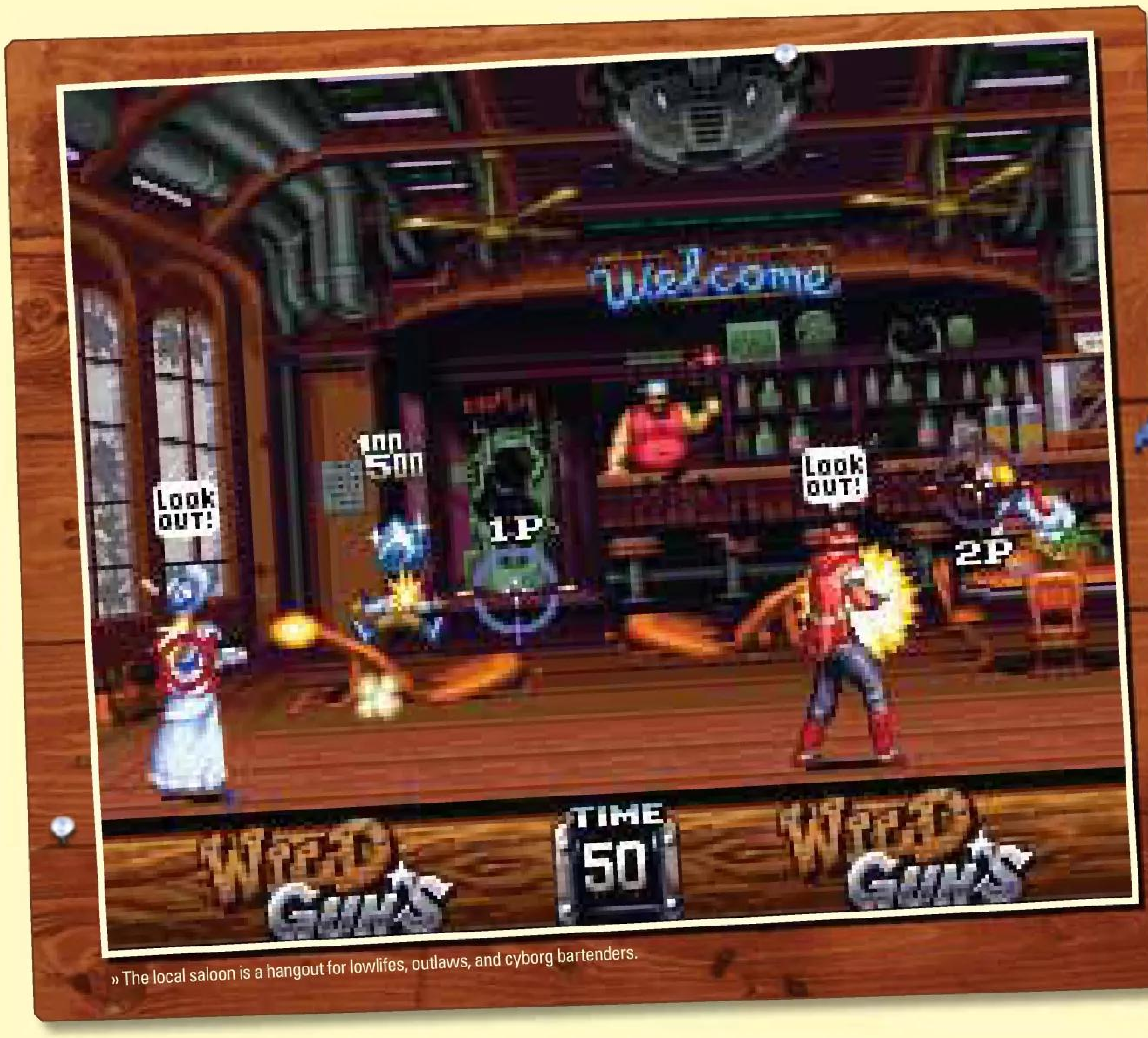
» The start of the ammo depot stage. There's a lot of dynamite flying about.

Those of you of a certain age may recall the old animatronic Western-themed shooting galleries found at amusement parks in the Eighties and early nineties. Packed with intricately arranged Americana, primed to react in various amusing ways when you hit them with your imaginary Winchester '73, they were so densely packed with stuff to shoot at it boggled the mind. *Wild Guns* is a bit like that, except with cyborg gunslingers instead of Uncle Zeke in his rocking chair with a jug of moonshine. Set in an alternative steampunk Wild West of neon hoardings and huge mecha bosses, it's a lightgun game without lightguns, evoking arcade shooters like *Cabal* and its semi-sequel *Blood Bros.*. Packed with impressive anime-style graphics and imaginative character and boss design, the game introduced us to grizzled bounty hunter Clint and plucky saloon girl Annie, battling their way through hordes of metallic cowboys in an attempt to bring down the gang that killed Annie's parents. And for our money, it's the finest game of its type on the Super Nintendo console, and quite possibly, any other platform too.

Wild Guns was developed by Japanese software studio Natsume, probably best known in the West as the publisher of the *Harvest Moon* farming RPG

IN THE KNOW

» PUBLISHER: NATSUME/TITUS (EU)
» DEVELOPER: NATSUME
» RELEASED: 1994
» PLATFORM: SNES
» GENRE: ACTION



» The local saloon is a hangout for lowlifes, outlaws, and cyborg bartenders.

> "We felt that the game wouldn't be flashy enough with only the Western setting"
>
> Toshiyasu Miyabe

franchise. The bulk of the project was created by a small three-man team, game designer and graphic artist Shunichi Taniguchi, programmer Toshiyasu Miyabe, and musician and sound designer Hiroyuki Iwatsuki. It was the result of a request from Natsume for an original game that could be completed quickly and cheaply. The development time for the game was a surprisingly short five months.

"At the time, Taniguchi-san liked the arcade game *Dynamite Duke* and I was a big fan of the arcade game [and the similarly Western-themed] *Blood Bros.*," remembers Miyabe. "So we thought about making a similar pseudo-3D shooting game. Since it's a shooting game that uses guns, the Wild West setting was only natural. However, we also felt that the game wouldn't be flashy enough with only the Western setting, so we added the sci-fi elements." Adding futuristic elements, inspired in part by the manga *Cobra*, turned *Wild Guns* into something quite unique, giving it the feel of something akin to a cross between the old *Wild Wild West* TV show and the Saturday morning anime *Battle Of The Planets*. Throw in an epic Morricone-style soundtrack, including a riff cheekily lifted straight from *The Good, The Bad and The Ugly*, and it's fair to say the team ended up with something rather special.

Wild Guns appeared relatively late in the life of the SNES console, debuting in 1994 in Japan, North America a year later, and only making it to European stores in 1996. When work began, the trio had recently completed an update of Taito's *The Nnja Warriors* for the SNES, and were keen to continue on the platform, despite the onset of the new generation of gaming machines including the upcoming PlayStation. "We had experience working on the SNES and were all set with the development environment and tools," explains Miyabe. "We really wanted to try and master development on the SNES rather than spreading out our resources learning a new system."

A lot of the development time was devoted to fine-tuning the controls. The playable characters, Clint and Annie, were named after a suggestion from Natsume's American office, no doubt inspired by legendary sharpshooter Annie Oakley and a certain low plains drifter**.** Originally each character's gunsight was locked horizontally, with the player only being able to move it up and down and by moving their onscreen avatar left or right. After this version proved understandably ▶

WILD GUNS RELOADED

Natsume's remaster of *Wild Guns* surprised many when it was first announced early last year for the PlayStation 4, but it proved to be quite a draw when demonstrated at the E3 and other gaming events that same year. To all intents and purposes its the same SNES game that those lucky enough to get to play first time round will remember, but it's been completely overhauled for widescreen HD systems with improved detail (especially noticeable in the rendering and animation of bosses) and a completely remixed soundtrack. Two new characters, Bullet the dachshund, with his floating drone pal, and Doris, a crazy grenade-throwing lady, have been added, which both play very differently from the original Clint and Annie. The game also now supports local co-op multiplayer for up to four people. Even better, *Wild Guns Reloaded* includes two all-new stages derived from ideas the team had at the time of the original game but couldn't implement, namely a subterranean base plus a spectacular assault on a fleet of airborne battleships. There's also a new laser weapon, which proves a lot of fun to use. Unfortunately there's no online multiplayer mode, which feels like a bit of an oversight. And there isn't a European physical disc release, unlike North America, meaning it feels a bit expensive at £24.99 for the download. Having said that, though, that's peanuts compared to what the SNES version will set you back nowadays.

97150
1P:2
TIME
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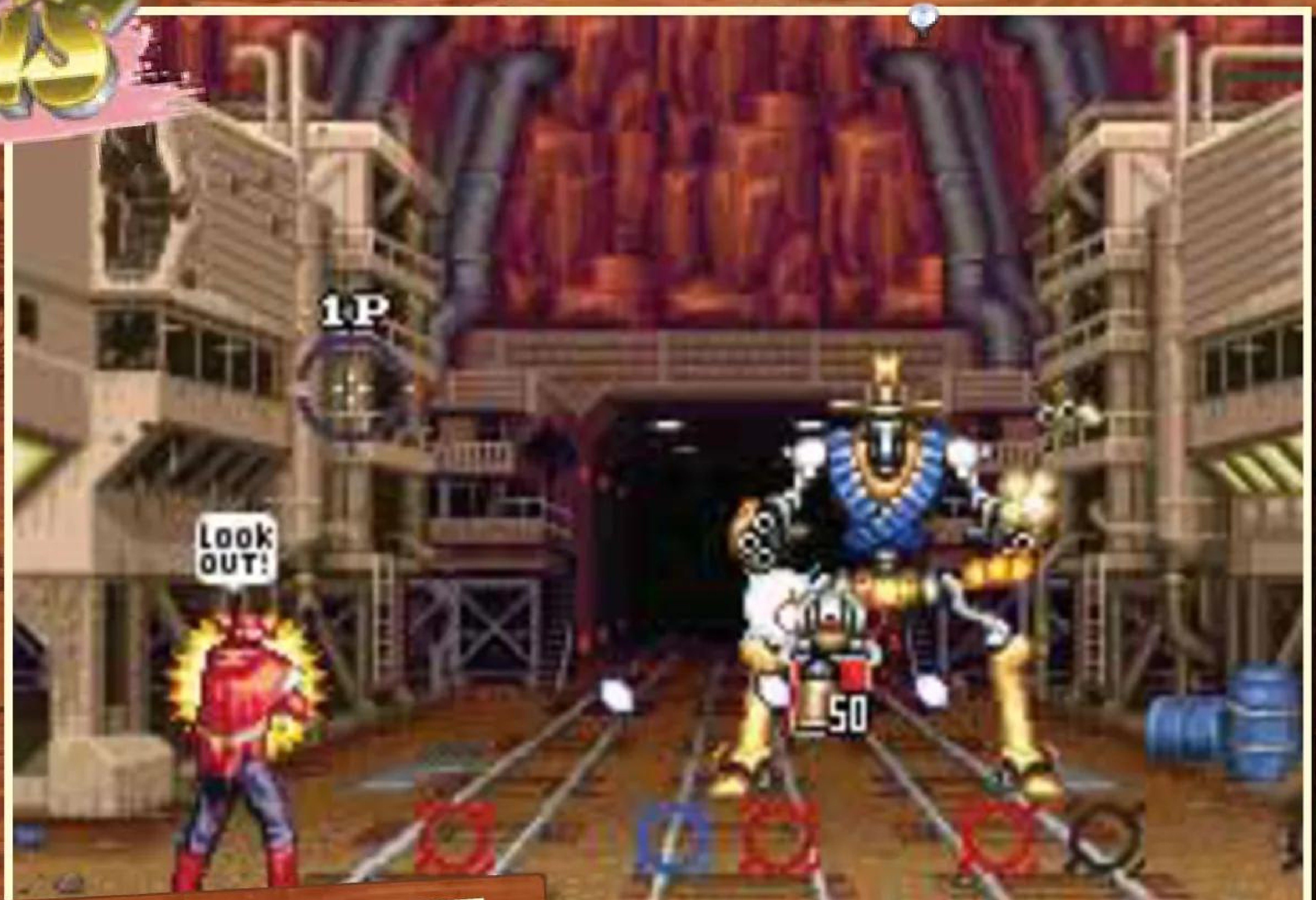
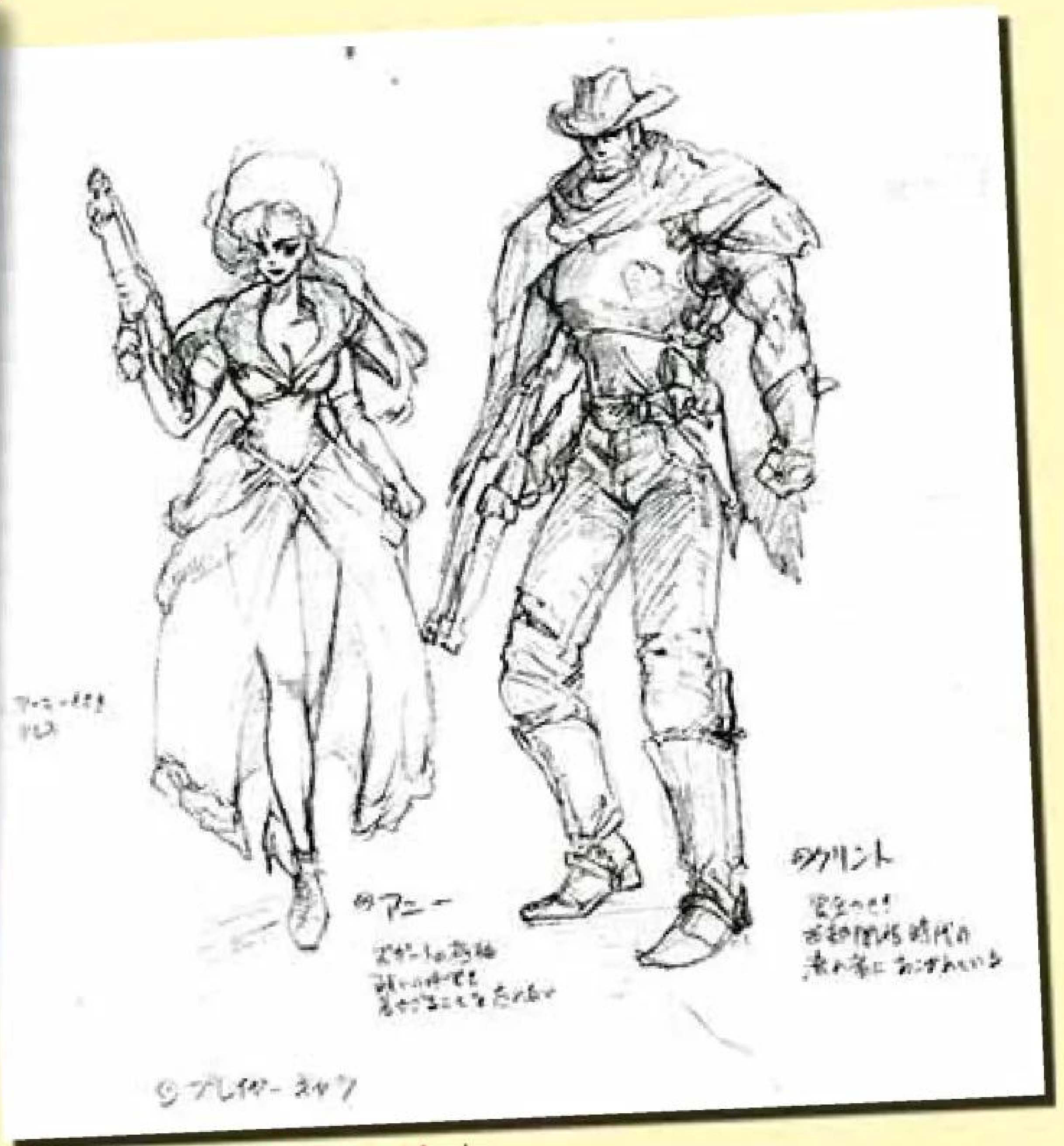
WILD GUNS

» Boom! That'll learn him.

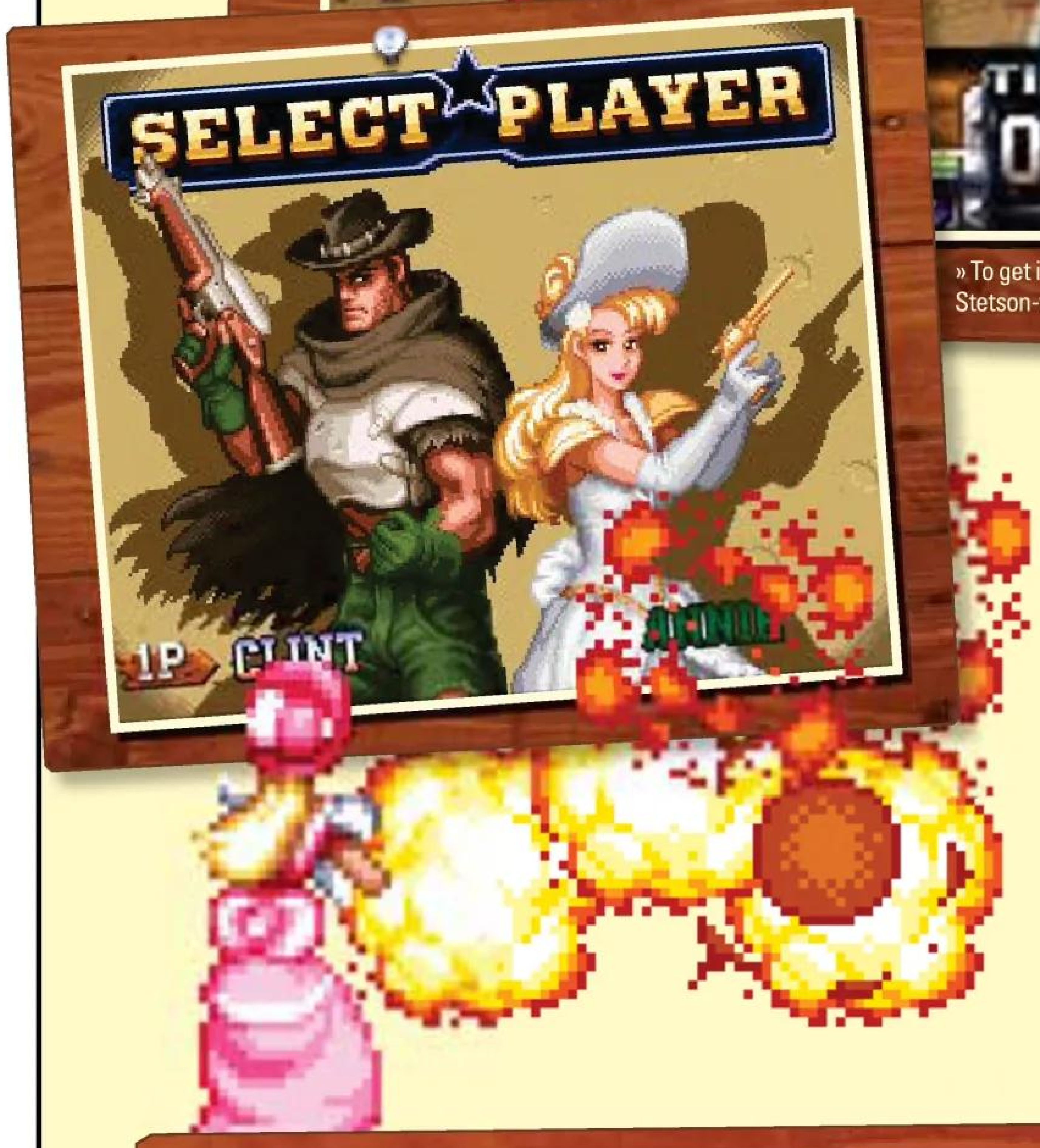
TEAM SCORE
227560
1P
102780
TIME
20
76780



» To get into the gold mine you need to take down this Stetson-wearing robot gunslinger. And he'll be back.



» Original concept art for Clint and Annie.

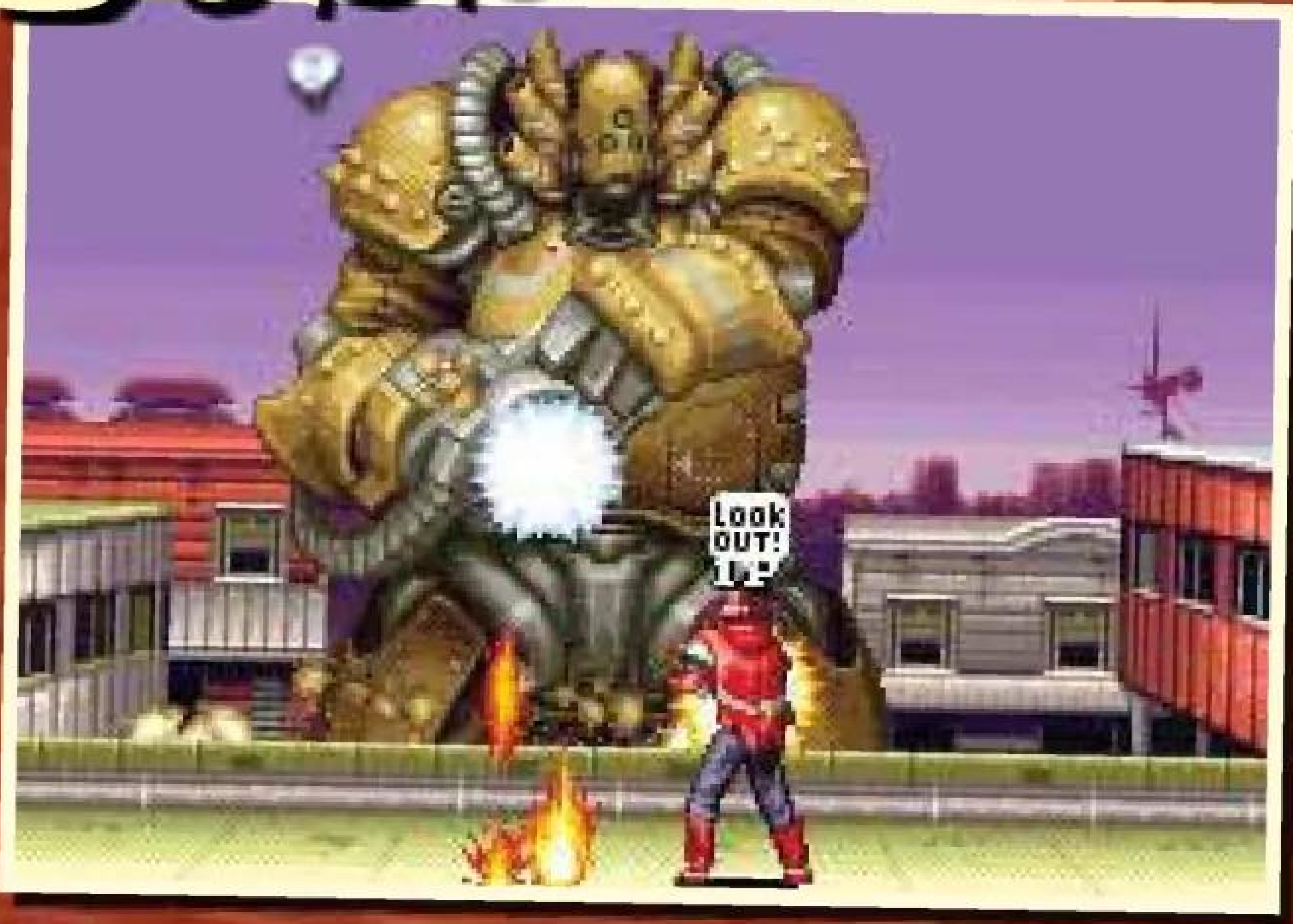


▶ difficult to play, the control system was switched to allow independent movement of the crosshair in relation to Clint or Annie. "Coming up with a good control method using the buttons of the SNES was tough," admits Miyabe. But what resulted was a flexible system, using only three buttons, allowing Clint and Annie to jump and roll their way out of danger, shoot, lasso and freeze enemies (by double tapping the fire button), and trigger a screen-clearing dynamite blast when things got a bit hairy. The lasso dynamic turned out to be particularly useful in two-player co-op sessions, allowing one player to momentarily stun enemies and even bosses while the other concentrated on taking them down with munitions.

Because the pseudo-3D depth of the screen sometimes made it difficult to determine the precise location of enemy bullets, the team also added a pop-up 'look out!' speech bubble to help players better keep track of incoming fire from the bad guys. "We always kept in our mind about how to avoid unreasonable or unfair deaths, and the answer to this was to add a signal that lets the player know that a bullet was coming towards their character," Miyabe explains. "We were able to achieve this game balance, however, at the same time it created some tricky bugs that gave us a hard time to fix."

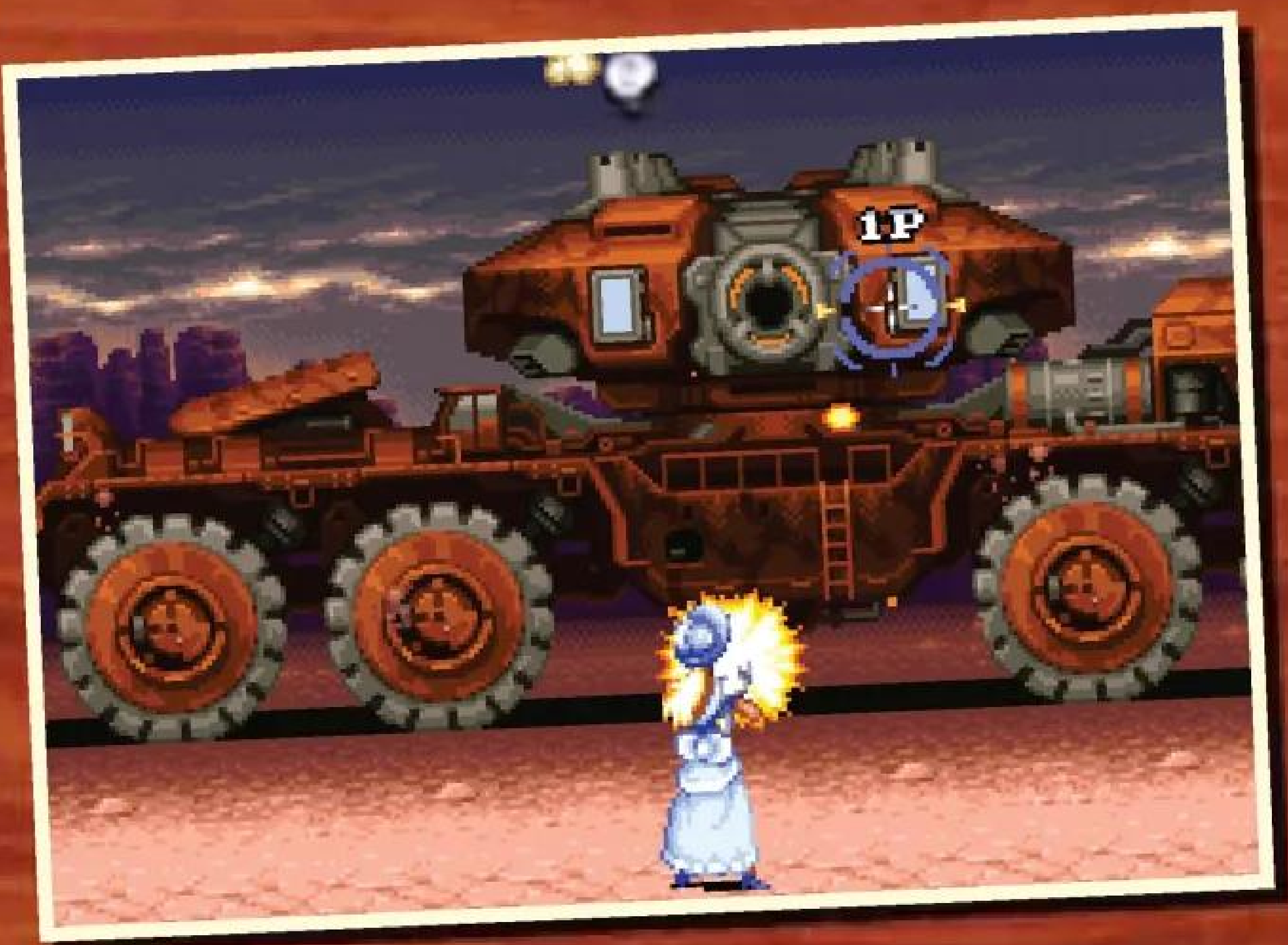
One of the game's many neat touches is the fact that nearly everything rendered in such beautiful pixel art can be destroyed, or at least visibly ridden with bullet holes. This includes most of the backgrounds, where bottles break, signs smash, barrels shatter, objects catch fire, and more. "The destroyable backgrounds were difficult, but what really gave us a hard time was the fact that we had to create [all] the 'destroyed' graphics by hand," Miyabe reflects. "But we wanted to give players an exciting and exhilarating

BOSS RUSH



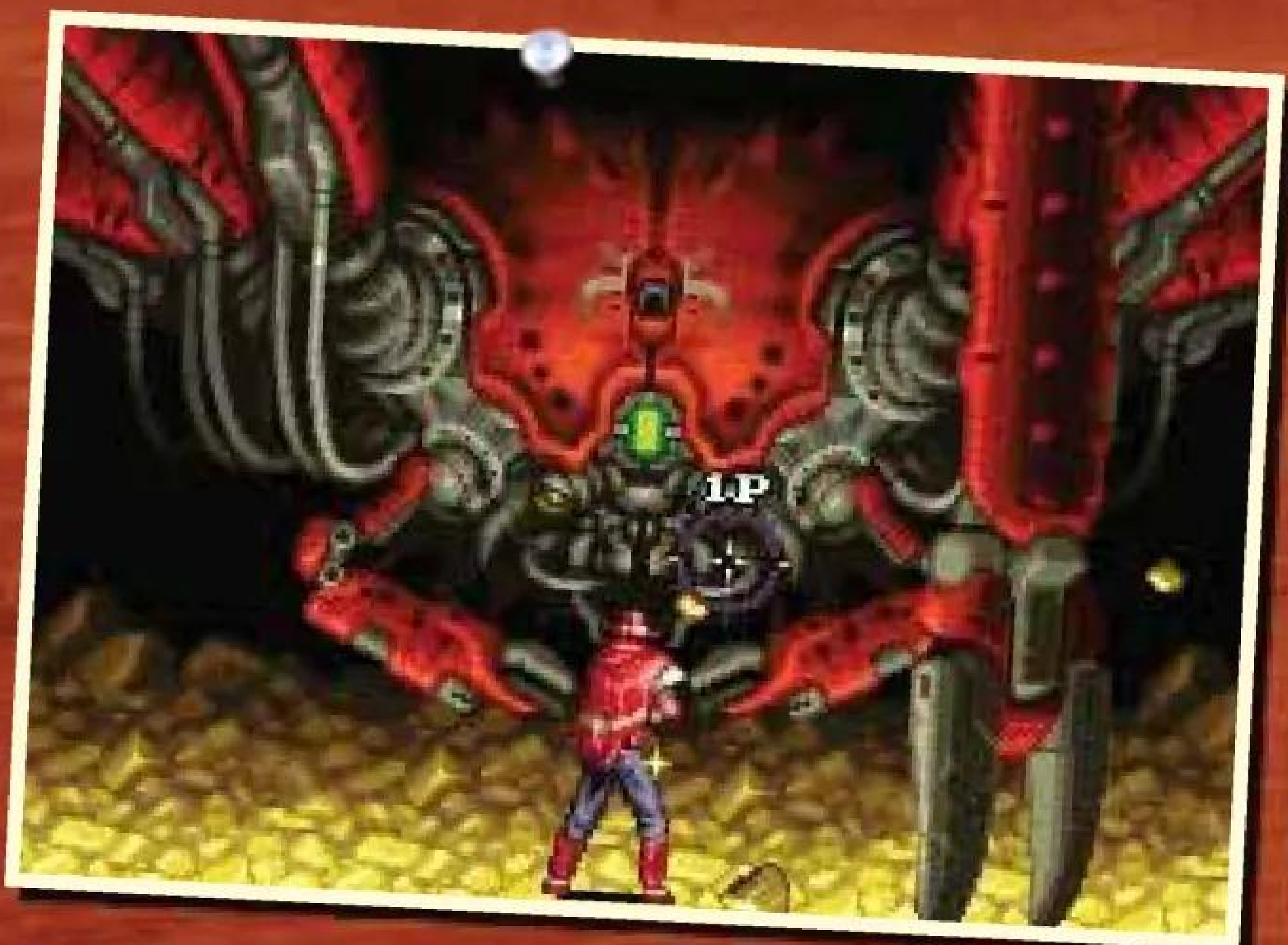
GIANT MECH

■ This armoured robot comes equipped with an enormous Gatling gun and shoulder-launched missiles, meaning you don't want to make him angry. His weak spot is his head, so blast it until it pops off so you can head into the bar for a celebratory bourbon.



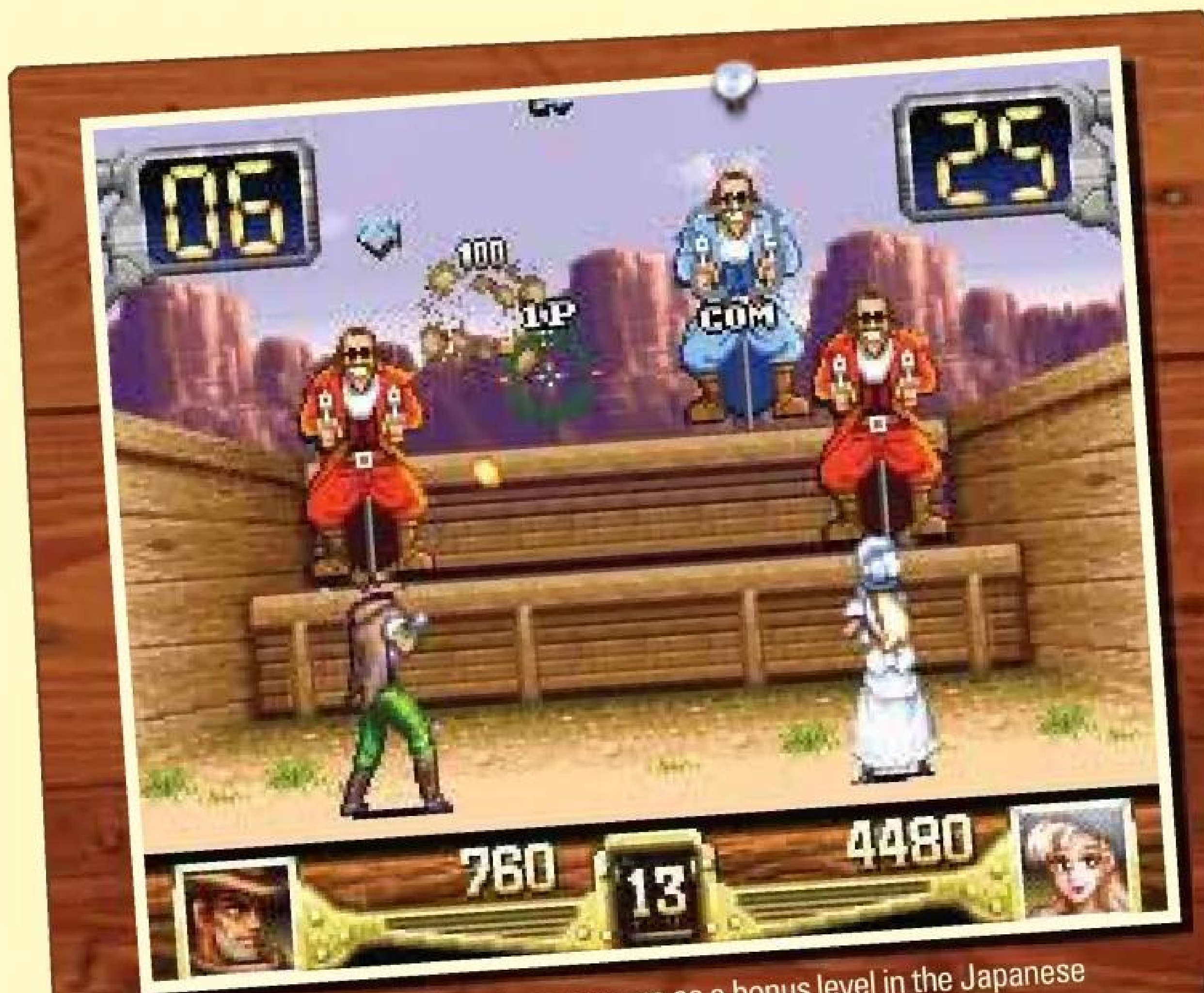
DESERT TANK

■ Possibly the most visually impressive boss in the game, this eight wheeled monstrosity features rotating axles and turret, and a screen-filling flamethrower. Not great when all you have for protection is a revolver and a blue cotton bonnet.



CRAB GUARDIAN

■ It's possibly surprising to find a crab in the middle of Nevada given its arid climate, but hey ho. He's a sort of crustacean Smaug, guarding the treasures of the gold mine stage, and he likes to freeze you before stomping on you with his big pincers.



» This shooting gallery stage pops up as a bonus level in the Japanese version. It's also available as a minigame.

feeling when they played the game, as well as give them the catharsis of destroying various objects. Also, because the levels don't scroll in any way, we concentrated on how we could increase the gameplay using just one screen. And to increase the feeling of the Wild West setting, we added a heat haze effect. I came up with this idea after seeing *RoboCop 3*!"

It was important to the team that *Wild Guns* was an enjoyable co-op two player game, and indeed this is one of the title's most enjoyable features. There's nothing quite like taking down a hulking great robot or a massive flame-throwing tank in the middle of the Arizona desert with a buddy. "Our main goal was to surprise the player, and we emphasised the size of the bosses and their attack methods," says Miyabe. Care was taken to ensure that each of the boss fights was challenging but fair, and that targets and weak points were easily visible, highlighted by flashing indicators when hit. *Wild Guns* even makes it easier to practice the stage and boss of your choice by allowing players to select the order in which they tackle the middle four areas of the game, which include a gold mine, an ammunition factory and a moving armoured train.

Due to being released towards the end of the life of the SNES, *Wild Guns* didn't make a huge impact at the time, despite positive reviews praising its gameplay, visuals and sound. However, in retrospect, the game has taken on the mantle of bona fide cult classic, with copies changing hands on Ebay for surprisingly large sums, something which hasn't escaped the notice of Miyabe."Yes," he laughs, "we've seen it being sold for more than 100,000 Yen [about £700] in Japan, and, of course, we each have a copy for ourselves!"

> "We've seen it being sold for more than 100,000 Yen in Japan!"
>
> Toshiyasu Miyabe

Fortunately, there are several other ways to get to play *Wild Guns* these days, and the game stands up surprisingly more than two decades on, retaining its fun playability, and feeling as timeless as Gene Wilder in *Blazing Saddles* and Jane Fonda in *Cat Balou*. The title was rereleased on the Virtual Console for Nintendo's Wii in 2010, the Wii U in 2014, and more recently a remastered version, *Wild Guns Reloaded* was launched on the PS4, with plans for a PC port via Steam to be released later this year. This new version features updated widescreen HD graphics coupled with classic gameplay and stages from the original, along with two all-new characters, simultaneous four player co-op, and two bonus levels inspired by ideas that never made it into the SNES version.

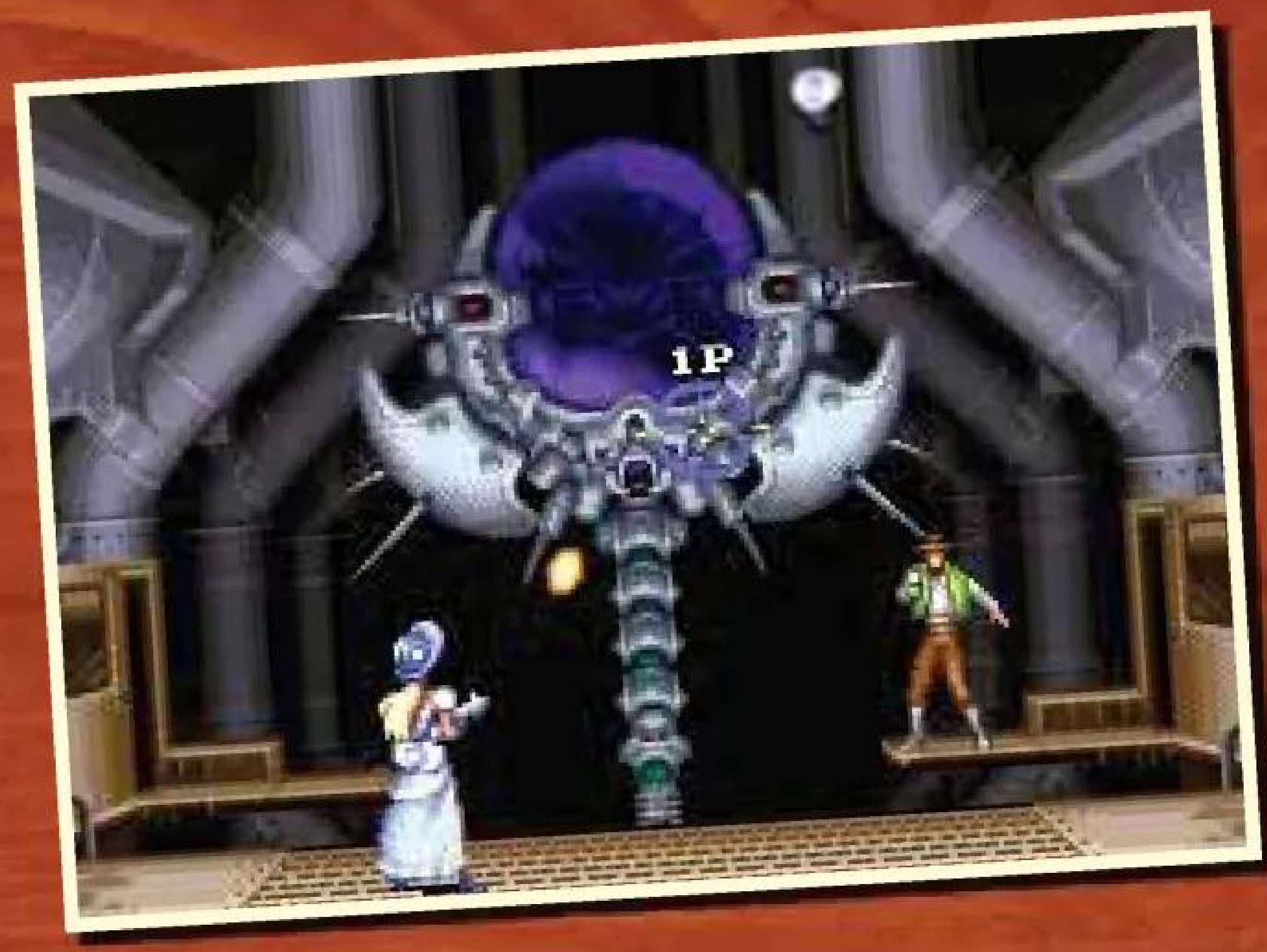
"When we started development on *Wild Guns Reloaded*, we were anxious about whether a retro-looking game would fit in today's market," says Miyabe of the project that reunited the original trio to reprise *Wild Guns* for modern audiences. "However, looking back on what we have created, we felt that the same essence and core enjoyment was there even after 22 years." As to why the game was released as a PS4 exclusive, Miyabe explains: "We had the console we wanted to release the game on in our mind when we started, and because this game was made by just the three of us, we concentrated on one platform."

The new characters in *Wild Guns Reloaded* are distinctly different from Clint and Annie, who played all but the same bar for one of them wearing a dress. Bullet is a small sausage dog with a floating robot drone, while Doris is a lady who likes to rely on explosive grenades. "It was really difficult to finalise Doris and Bullet, but we always had in our mind to make these new characters have a different style of play from Clint and Annie," says Miyabe.

True to its roots on the SNES, the team was keen to ensure the retro influence extended to other areas of the remaster. "When we made the new music, we actually started by making songs using the SNES sound source," he reveals, "and then arranged it like we did with the other music in the game."

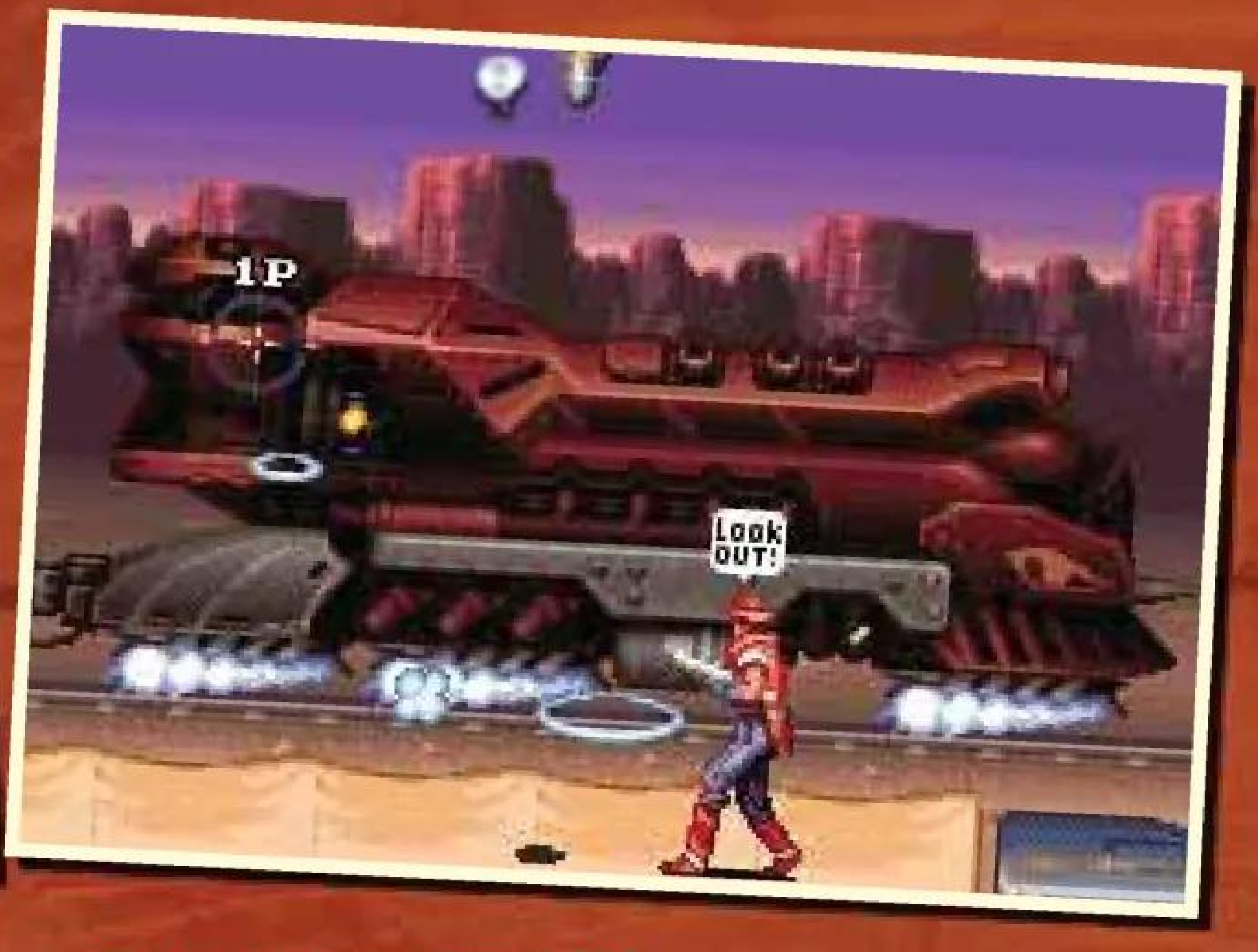
We mention to Miyabe that despite its lack of popularity when it first arrived, it feels like his game is finally being recognised for its unique and enduring appeal amongst retro-minded fans. "Well, firstly, thanks for the compliment," he replies. "As for us, we feel like there are hardcore fans of the game, but, frankly speaking, the three of us don't feel like it's that popular!" But then, you could say that about the film *Once Upon A Time* in the West. And that's terrific. *

» "Annie are you okay? Are you okay Annie?"



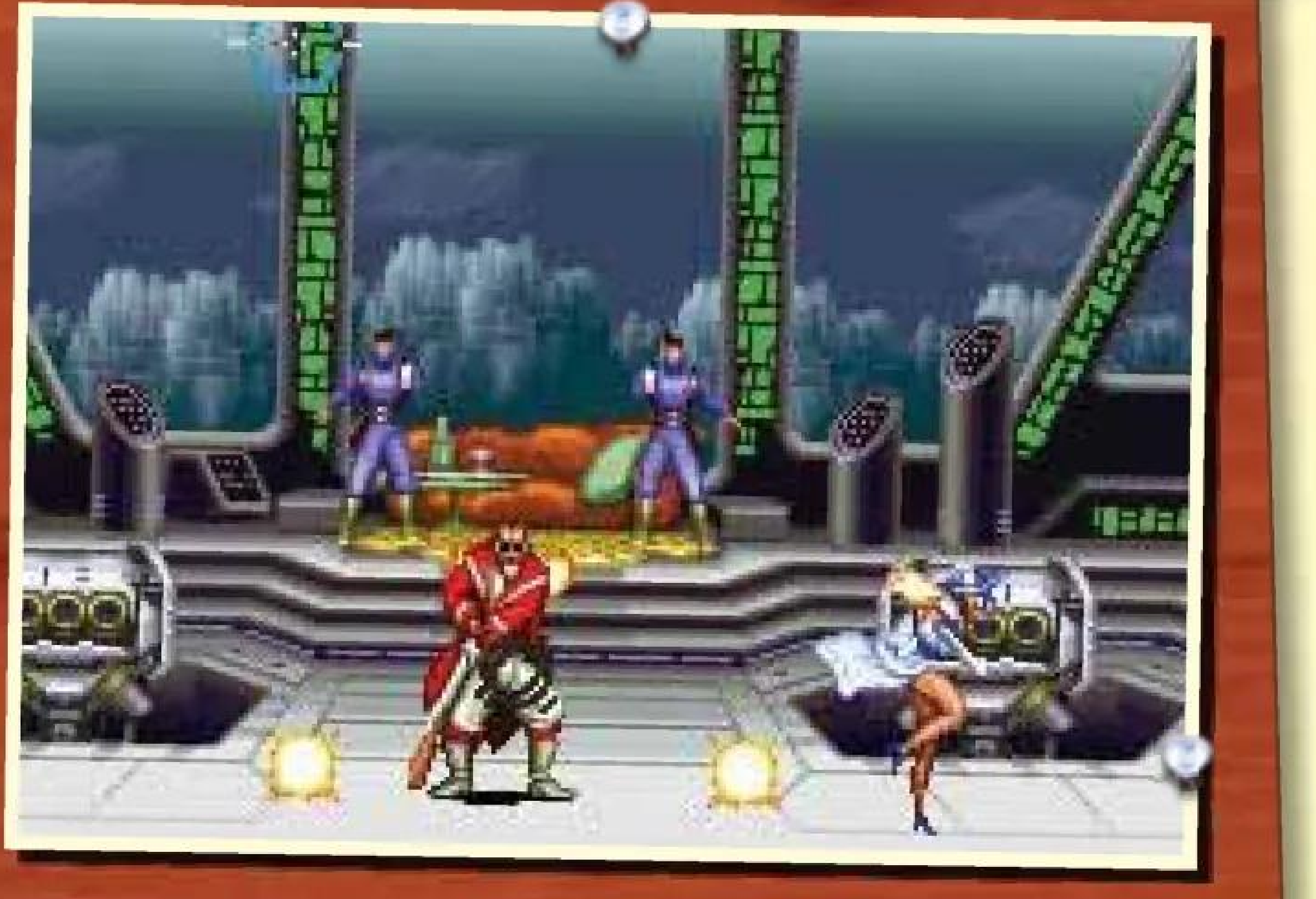
CYCLOPS BOT

■ This glassy-eyed terror droid pops up at the end of the ammo depot level and has a mean ability to freeze you on the spot before peppering you with bullets if you're not careful. Luckily, shatterproof glass hasn't been invented yet in the Wild West.



ARMOURED TRAIN

■ This stage of *Wild Guns* is one of our favourites, as you scoot along the roof of rumbling carriages, blasting the enemy on an unexplained parallel track. Looking like a giant hovering sandcrawler this boss is very *Star Wars*, except for being a train.



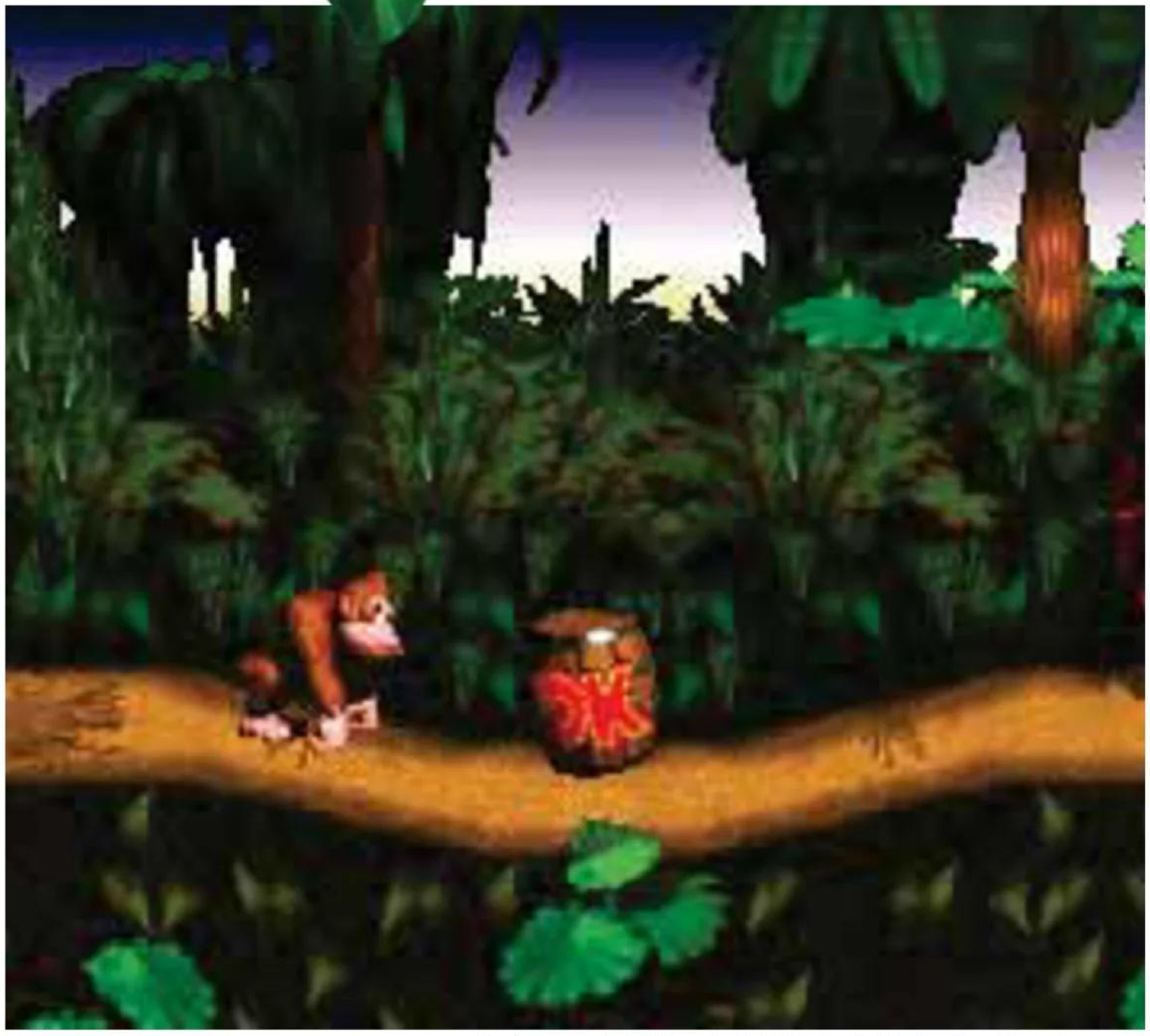
GANGBOSS KID

■ The final boss is the head of the Kid family that killed Annie's parents, and he reminds us a bit of Dr Loveless in *Wild Wild West*, by inhabiting a giant robot/ship thingy. Shoot his minions and gun sentry towers then blast him. Revenge is yours.

THE MAKING OF

DONKEY KONG COUNTRY

It's been 25 years since British studio Rare rebooted one of Nintendo's first mascots, giving us the ideal excuse to uncover the history of this smashing SNES title



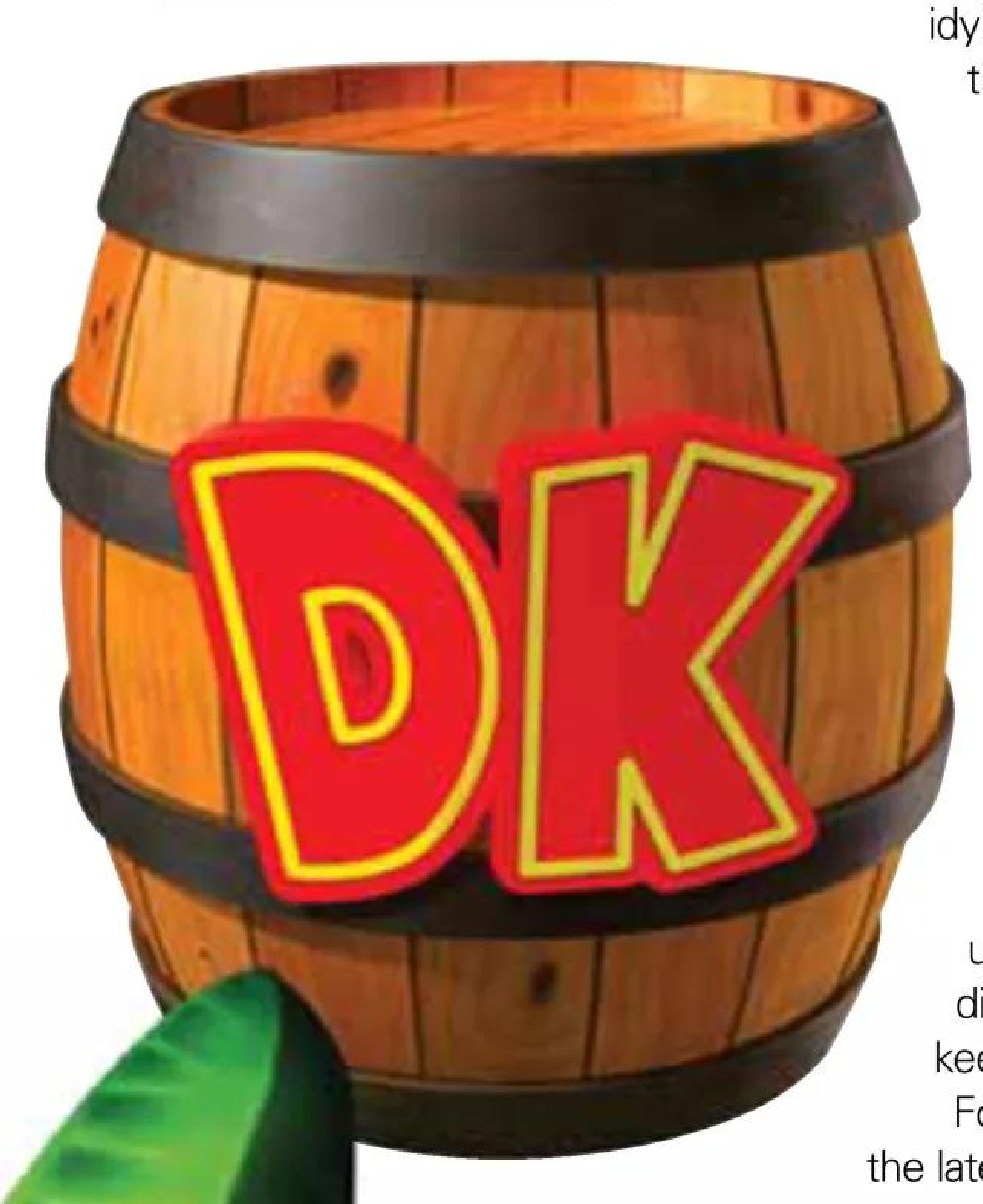
» Rare's purpose-built HQ was funded off the back of *Donkey Kong Country*'s success.

IN THE KNOW

» PUBLISHER: NINTENDO
» DEVELOPER: RARE
» RELEASED: 1994
» PLATFORM: SNES, GBC

Pretty much every game development studio of note has a title in its back catalogue that can be seen as a pivotal point in its evolution and growth. Valve has *Half Life*, id Software has *Doom,* and Square has *Final Fantasy*; these games provided the momentum that has propelled such esteemed companies to global stardom, and without these significant successes, it's highly plausible that such famous code houses might not even exist today. UK-based Rare is no exception to this rule. While the firm wasn't in any danger of falling into obscurity during the early Nineties, it's hard to imagine that it would have become quite as big as it is today without the propulsion provided by the 1994 SNES smash-hit *Donkey Kong Country.*

Today, Rare is a wholly owned subsidiary of Microsoft Game Studios and operates out of a purpose-built, high-tech HQ in the idyllic Leicestershire countryside, but prior to reviving the *Donkey Kong* brand, it was based in the rather less-modern surroundings of a Grade II listed farmhouse, just a few miles up the road from its current residence. Despite the lack of swanky offices, it was just as fascinating a place to work as legend might have you believe. "Rare was an amazing place back then," recalls Brendan Gunn, who was employed as a technical programmer on *Donkey Kong Country* and had previously worked on the NES classic *Captain Skyhawk*. "It was quite a small company with a real family feel. Games were created in a very organic way, not planned out in detail in advance. We were always free to just try out ideas. Whatever worked would stay, and if it didn't feel good, we just ripped it back out again. In those days, it was not uncommon for entire games to be shelved if they didn't show enough promise. I think this was key to keeping the quality high."



Following a string of commercial successes during the late Eighties and early Nineties, the Stampers faced an uncertain future – as did the industry in general. The next generation of systems had started to arrive in the form of the 3DO, Amiga CD32 and Philips CD-i, but owners of existing 16-bit consoles seemed curiously reticent to upgrade, thanks largely to the unproven nature of CD-ROM systems and the high cost of new hardware. Sensing that the current generation still had some life in it but simultaneously mindful of an exciting new era just around the corner, the Stampers began to invest heavily in new graphics tech with the ultimate aim of creating one of the most advanced code houses in the British Isles.

It was a risky strategy, which involved great expense and temporarily limited the development output of the studio, but it was one that ultimately paid off; encouraged by the work being undertaken in Twycross, publishing partner Nintendo decided it was time to invest in the firm and promptly purchased 49 per cent of the company. "Rare began experimenting with creating 3D-rendered characters with our expensive new Silicon Graphics computers," Brendan explains, likening the situation to a perfect storm of events. "Visitors from Nintendo were suitably impressed by what we were working on, and Rare became a second-party developer. Rare had already impressed Nintendo with some excellent games, several of which Nintendo had actually published themselves. The obvious potential of pre-rendered 3D graphics would have sealed the deal, especially as the SNES was nearing the end of its life, and Nintendo was a little behind the competition in developing the next generation of 3D-capable consoles."

Nintendo's execs were so taken with what Rare had achieved with its shiny-new Silicon Graphics workstations that it effectively opened up its vault of properties and allowed the British company to take its pick – within reason, of course. "At this point, the door was open for the Stampers to push for the use of some existing Nintendo IP," Brendan says. "Obviously, they wouldn't give us a treasured character like Mario, but Donkey Kong had been largely abandoned for some time, and this was a chance to give him a new burst of life." Indeed, save for a few cameo roles, the mighty Kong had been largely dormant for the best part of a decade; his last outing was 1983's *Donkey Kong 3.* Ironically, during 1994 another Kong game would hit the market in shape of the Game Boy title *Donkey Kong '94* (see "1994's Other Kong"), but it was more of a retooling of the 1981 original than an entirely new adventure, and its release did little to detract from Rare's grand vision.

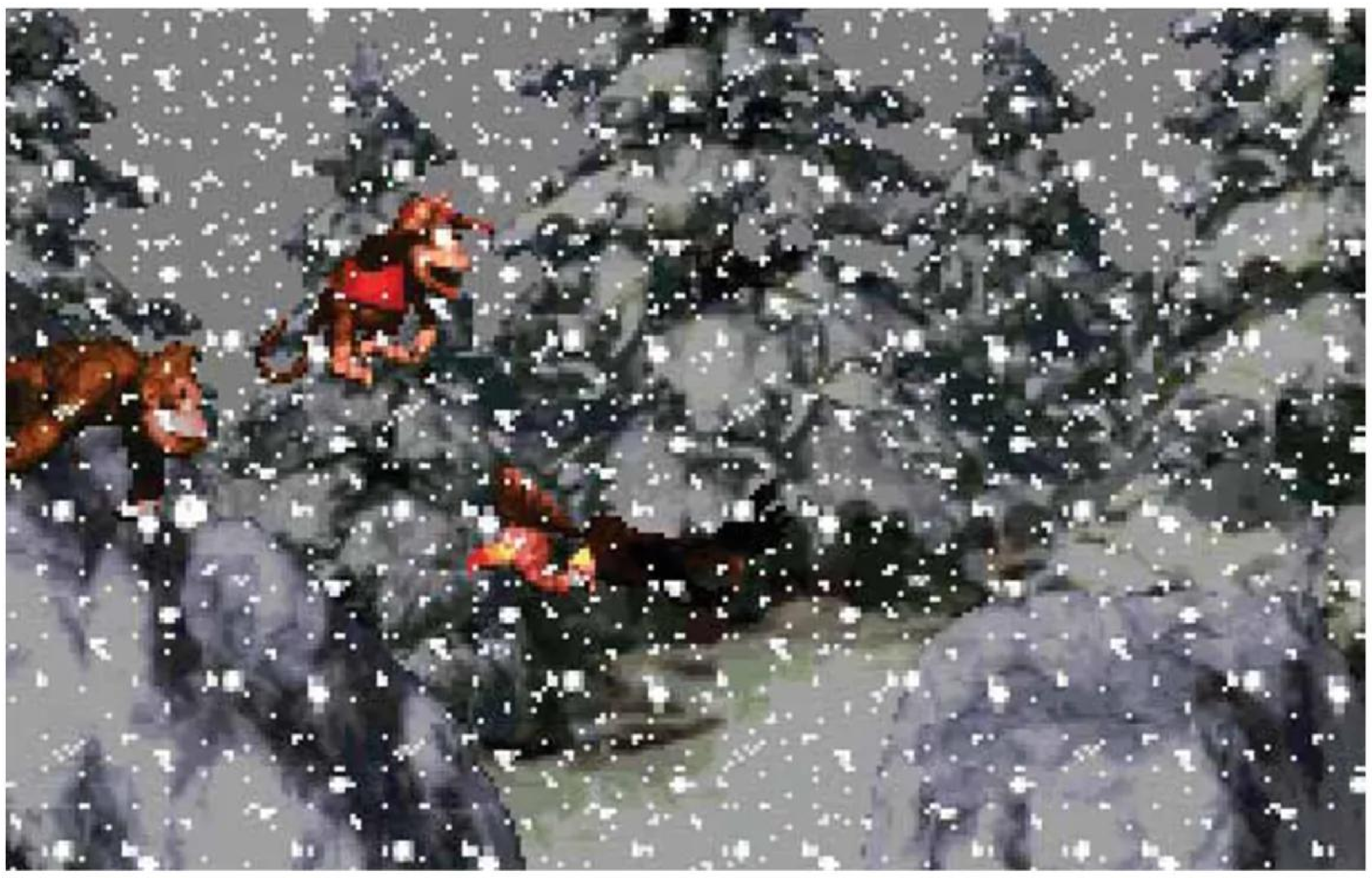
> **"Whatever worked would stay, and if it didn't feel good, we just ripped it back out again"**
> Brendan Gunn

Brendan's role on *Donkey Kong Country* was a technical one, and he had to come up with the code that would make everything sing. His contribution was an incredibly important one, but even so, he was unprepared for the first time that he laid eyes on Rare's fresh interpretation of gaming's most famous ape. "I was really amazed the first time I saw a 3D-rendered Donkey Kong model on screen," he recalls more than twenty years later. "It looked so different from traditional hand-drawn graphics, and far ahead of what consoles would be able to render in real-time for many years to come. It was very exciting and inspiring to work with these graphics. All my previous games had been solo projects in terms of programming, so *Donkey Kong Country* was different in that I could spend all of my time focused on the visuals, leaving the gameplay to Chris Sutherland. For me, that was a bigger difference than the pre-rendering. I was able to put a lot of time into really optimising the use of video RAM to get a lot of variation in the graphics. ▶

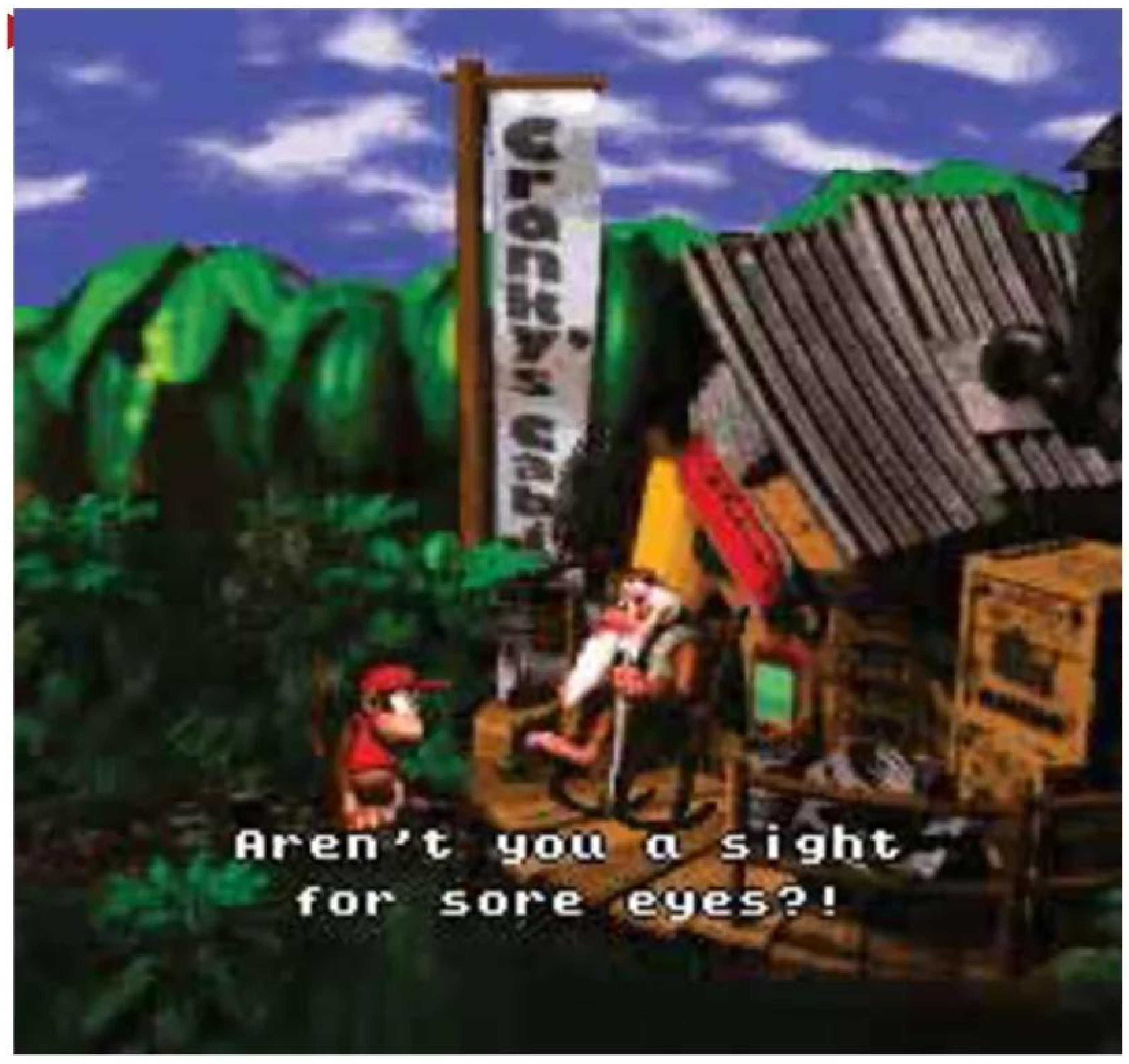
1994'S OTHER KONG

With two Kongs around, 1994 marked the battle of the apes

While Rare managed to kick-start Kong's career with *Donkey Kong Country* and turn the massive, bumbling primate into a household name once again, it wasn't the only title the popular character starred in during the bumper year of 1994. June (September in Europe) saw the launch of an all-new Donkey Kong adventure on the monochrome Game Boy system that is often referred to as *Donkey Kong '94*. Based loosely on the original 1981 arcade machine that started it all, it begins with the coin-op's first four levels, but quickly changes pace with 97 all-new stages that take the core gameplay seen in Kong's debut and turn it on its head with all manner of enhancements and improvements. Our hero Mario (who reverts back to his not-so-Super guise for this release) can swim, climb ropes and even catch incoming barrels, and there are boss fights to contend with as well, many of which are extremely fun. While the arcade game was a score-based venture, this portable outing is blessed with a battery back-up facility so that players can retain their progress. All things considered, *Donkey Kong '94* really is a fantastic update to the coin-guzzling original and rightly received critical acclaim on its release; however, hitting the market in the same year as Rare's legendary title perhaps dented its chances of long-lasting fame, and it has been rather overshadowed in the years that have followed. Thankfully, it hasn't been totally forgotten and is currently available on the 3DS Virtual Console, where it is well-worth investigating. One final point of interest is that Kong is wearing a red tie in this title, an item of clothing that Rare would factor into its own interpretation of the famous character – an interpretation that, it should be pointed out, has become the accepted norm on this infamous character since the launch of *Donkey Kong Country.*



» The variety showcased in the game's many levels, like this snow storm, really put rival SNES titles to shame.



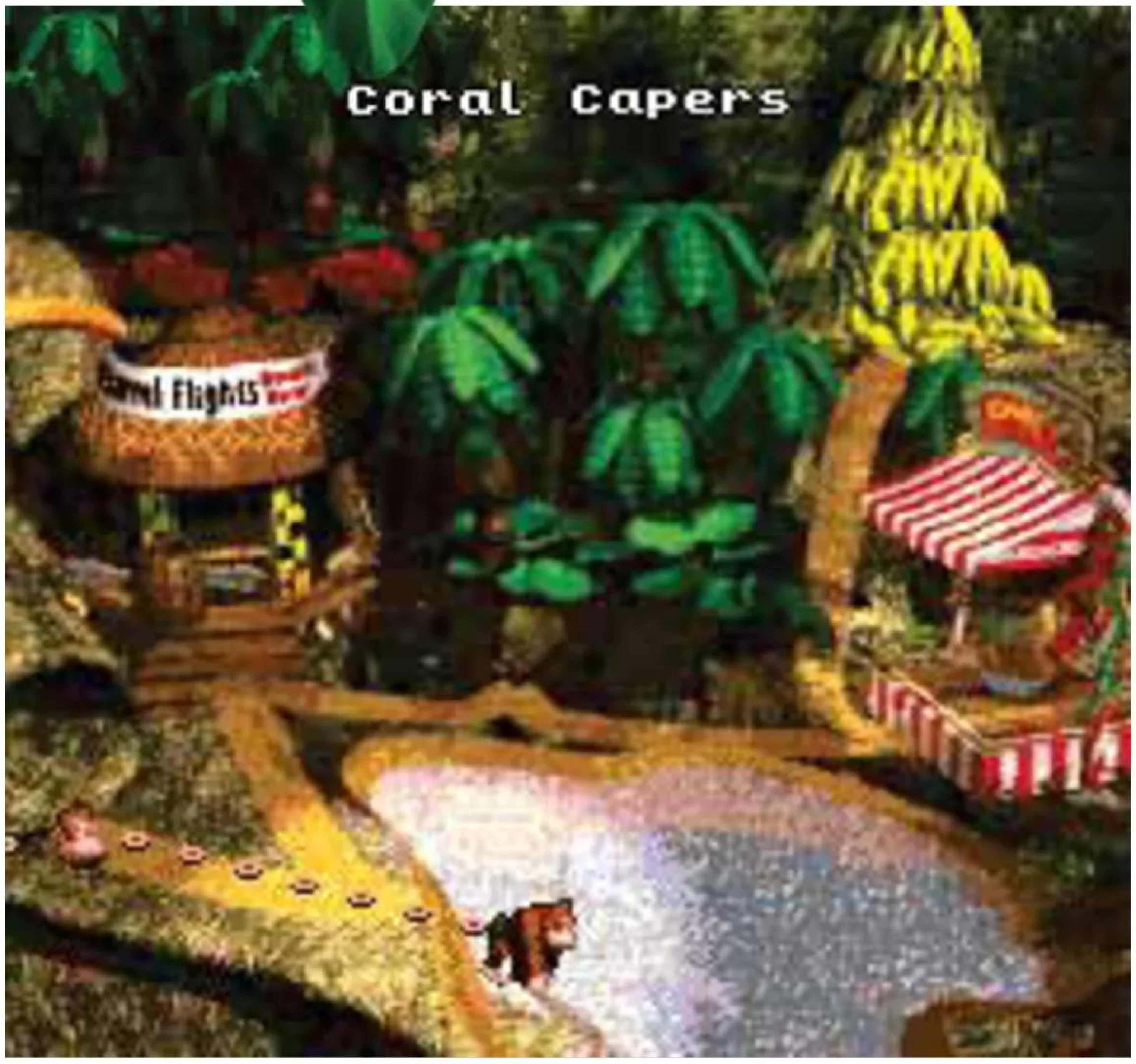
» Rare created an entire Kong family for the game, including the memorable Cranky Kong.

We didn't want it to look like there was a lot of repeated images on screen. I also spent a lot of time adding lots of layers of parallax in the backgrounds, and adding the day-to-night transitions and weather effects."

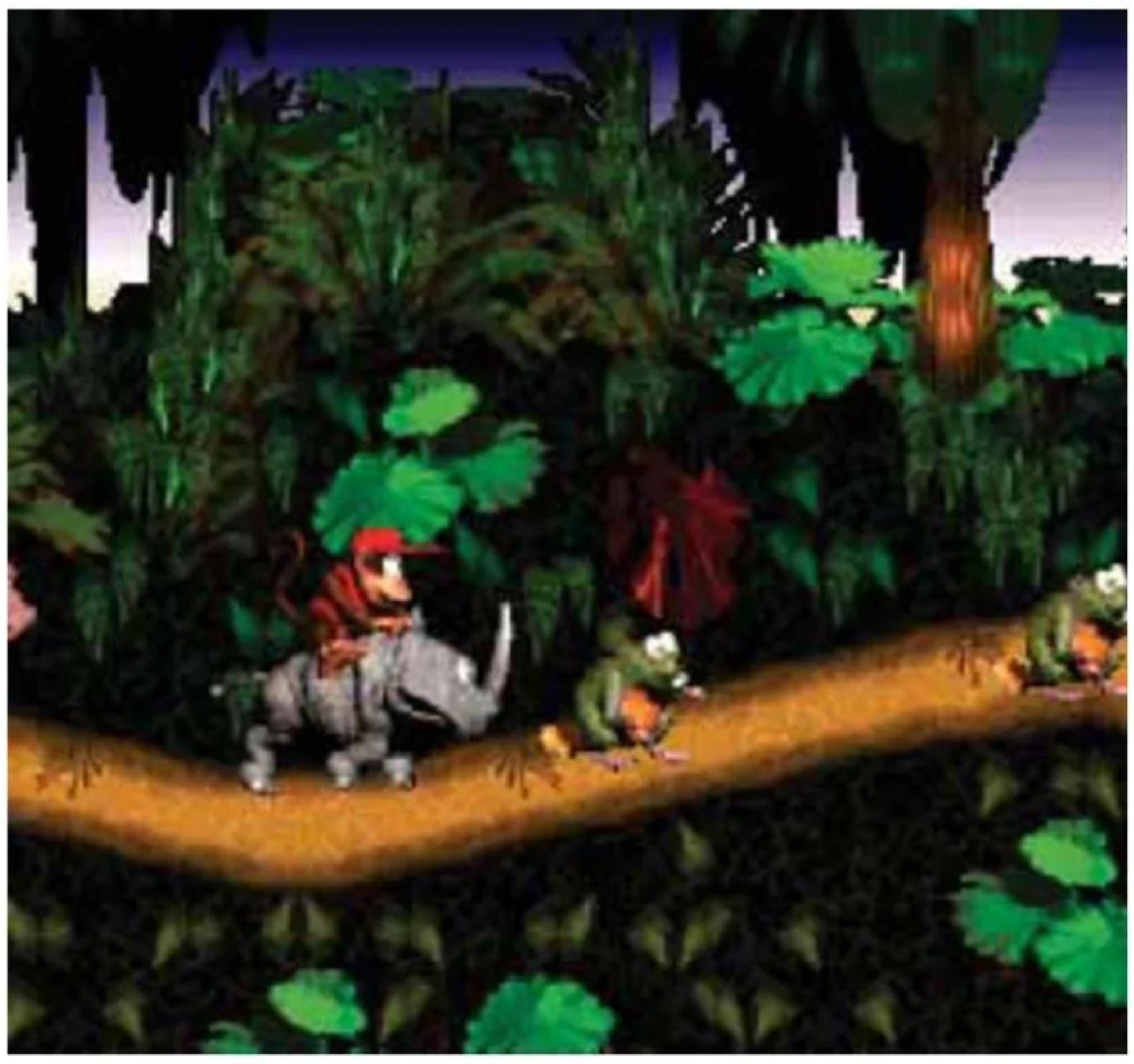
Those familiar with the geography of the English Midlands will be aware that Rare's HQ isn't the only thing that the small and rather sleepy village of Twycross is famous for – it also boasts an internationally renowned zoo, which houses the largest selection of monkeys and apes in the western hemisphere, making it the ideal research target for a game studio creating a title showcasing plenty of hairy primates. That's what you'd assume at least, but sadly the trip that occurred during the creation of *Donkey Kong Country* would prove to be a waste of effort. "I was not involved in the zoo visit, but I understand it was ultimately fruitless," Brendan smiles. "The animators tried making Donkey Kong move like a real ape, but it just didn't look right in the game and he finished up moving more like a galloping horse."

> **"When it comes to working on familiar genres, we looked to Nintendo. Why not learn from the best?"**
>
> Brendan Gunn

D*onkey Kong Country* was designed from the ground up to be a ground-breaking visual spectacle, but like so many titles of the period, it took inspiration from one of the oldest SNES games: *Super Mario World*. Kong is able to jump onto the heads of enemies – just like Mario – and collects bananas instead of coins; he also traverses a massive overworld map and is able to move freely between stages using connected pathways – something that was popularised by the *Super Mario* series and copied by Rare and countless other developers. To call this slavish cloning might be a little overzealous, but few would deny the fact that Rare's prestigious Nineties output benefited greatly from ideas generated by the Japanese company with which it shared a very intimate relationship. "Rare has made a lot of original games," starts Brendan, "But when it comes to working on familiar genres, we always looked to Nintendo for inspiration. Why not learn from the best? We always tried to put our own spin on things – not simply copying Nintendo's games – but



» The map screens hold a hidden regret for Gunn, who wishes he'd spent more time on pathways.



» *Donkey Kong Country* featured a number of animal helpers, including Rambi the rhino.

WHAT THEY SAID...

GAMEPRO
DONKEY KONG COUNTRY!

With such a strong replay value, *Donkey Kong Country* is sure to be a colossal hit this holiday. If you want to hit an ape ball in the side pocket, you'll recognise *DKC* for what it is: the gorilla of your dreams

GamePro, 1994

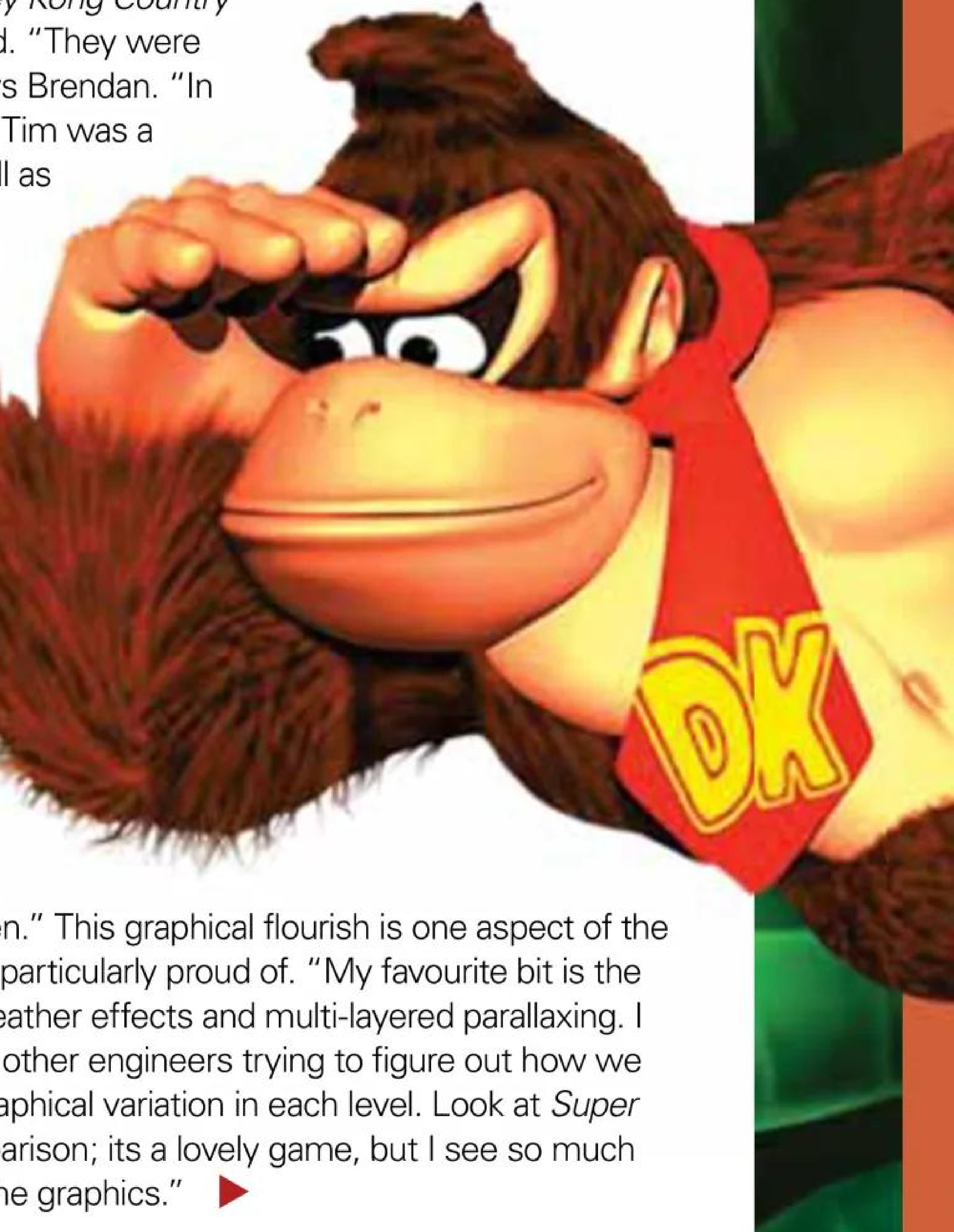
they often found brilliant solutions to common problems, so it would be foolish not to copy a few ideas."

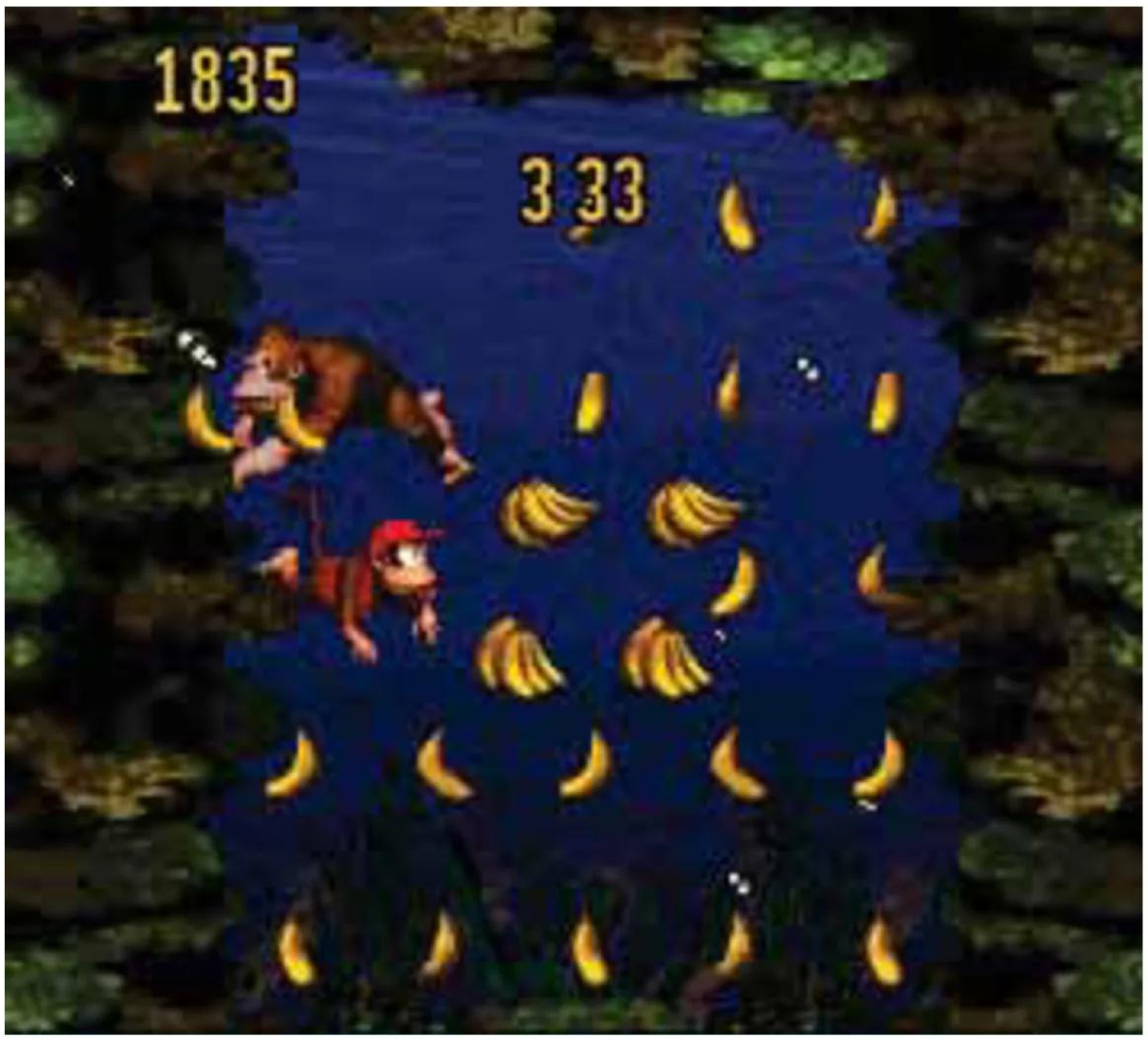
That's not to say that the team designing the game didn't come up with a few unique notions of their own – one of these being the use of Post It notes to plan out level designs, which resulted in some particularly memorable stages. "We wanted a process that allowed us to visually build up the level plans and also allow fast iteration at the initial design stage," Gregg Mayles tells us. Mayles worked as the main designer on the game and is still employed at Rare today, making him one of the studio's longest-serving staffers. While creating level layouts on paper certainly isn't anything innovative in the games industry, Post Its permitted the designer to switch scenes and change the plan quickly and effortlessly, rather than having to redraw entire portions of the level, which proved to be a huge benefit for the team. "Drawing things on bits of paper that could be shuffled around, reworked or replaced was ideal," continues Mayles – who, like Brendan, is a local lad and was born just a few miles from Rare's Twycross HQ. "Someone suggested these bits of paper could be Post It notes and it all went from there. It was a real revelation at the time and I still use Post Its at the heart of my design process today."

> **"Drawing things on bits of paper that could be shuffled around was ideal"**
>
> Gregg Mayles

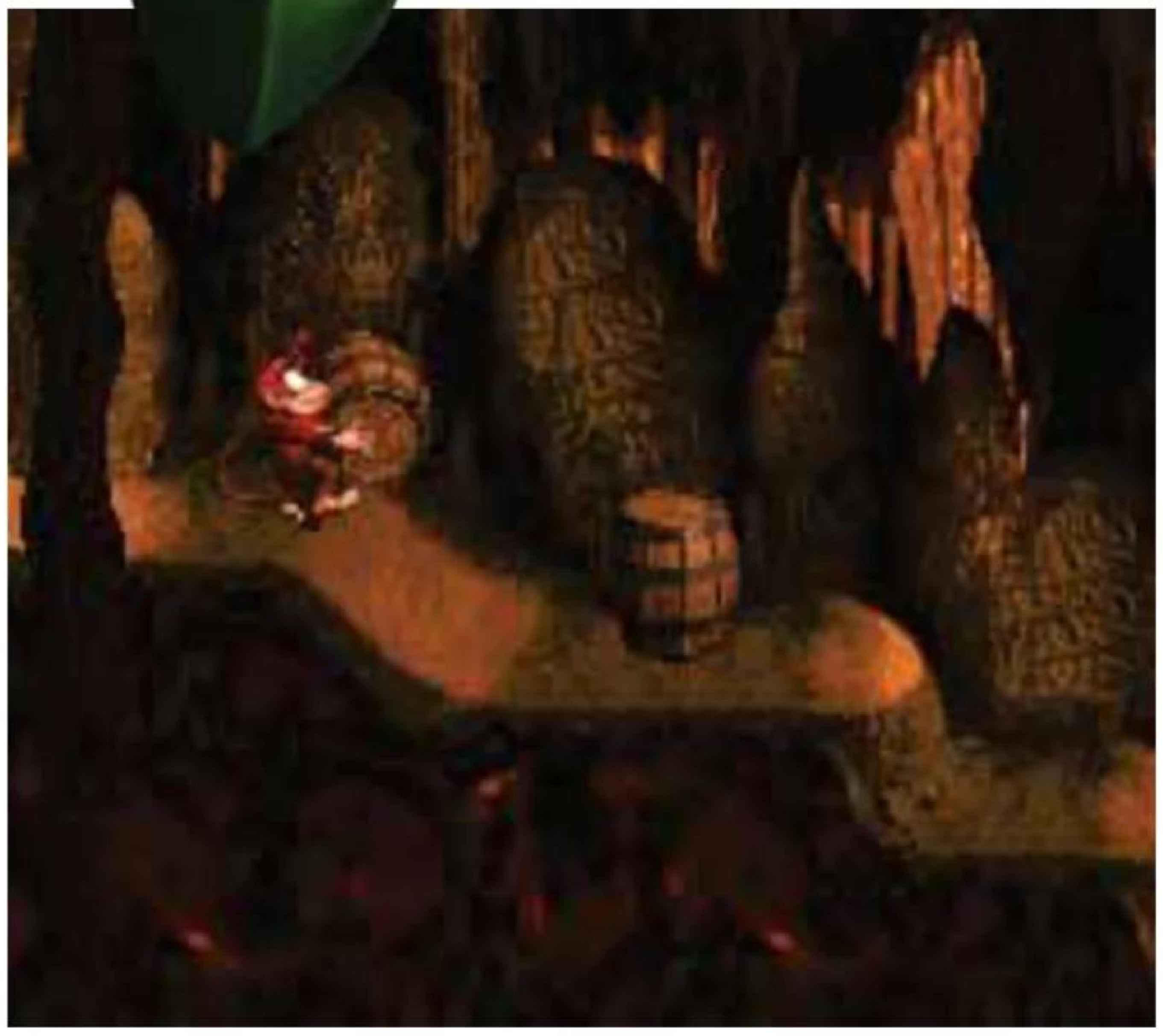
Given that Nintendo was bankrolling the creation of this new title – and that it used one of the company's most famous faces – you might assume that the Japanese veteran was quite hands-on with development. Brendan explains that even if such meetings took place – and only the Stampers really know the truth on the score – the team was kept well away from any distractions that could possibly impact the final product. "We had a great deal of creative freedom," Brendan enthuses. "As an individual, I felt free to try anything that could make the game look better, and as a company, I think Rare was allowed to make *Donkey Kong Country* very much our own product. Tim and Chris would always shield the team as much as possible from outside influences so we could focus on making the games to the best of our abilities. I understand that in the early stages of development, Miyamoto was very keen to exert some control over the look of the Donkey Kong character, as Tim had pushed his design a long way from the original. The final look was a great compromise – and I'm pleased to see that Nintendo hasn't deviated very much since then." Indeed, Donkey Kong today sports a look that is based more on the SNES titles than his previous adventures – an admission by Nintendo that Rare created the most aesthetically pleasing iteration of the great ape.

The Stampers have since left Rare to pursue other projects – it was recently revealed that Tim has founded a smartphone game studio in Nottingham called FortuneFish with his son, Joe – but their impact on *Donkey Kong Country* cannot be understated. "They were a huge influence," says Brendan. "In particular I remember Tim was a great motivator as well as a very talented artist. He would spend a lot of time with me, always pushing me to take things to the next level. For example, just having it rain wasn't enough. It should rain way in the distance first, and then gradually bring it forwards until it's raining in all the layers of the screen." This graphical flourish is one aspect of the game that Brendan is particularly proud of. "My favourite bit is the combination of the weather effects and multi-layered parallaxing. I really enjoyed hearing other engineers trying to figure out how we crammed so much graphical variation in each level. Look at *Super Mario World* for comparison; its a lovely game, but I see so much obvious repetition in the graphics." ▶

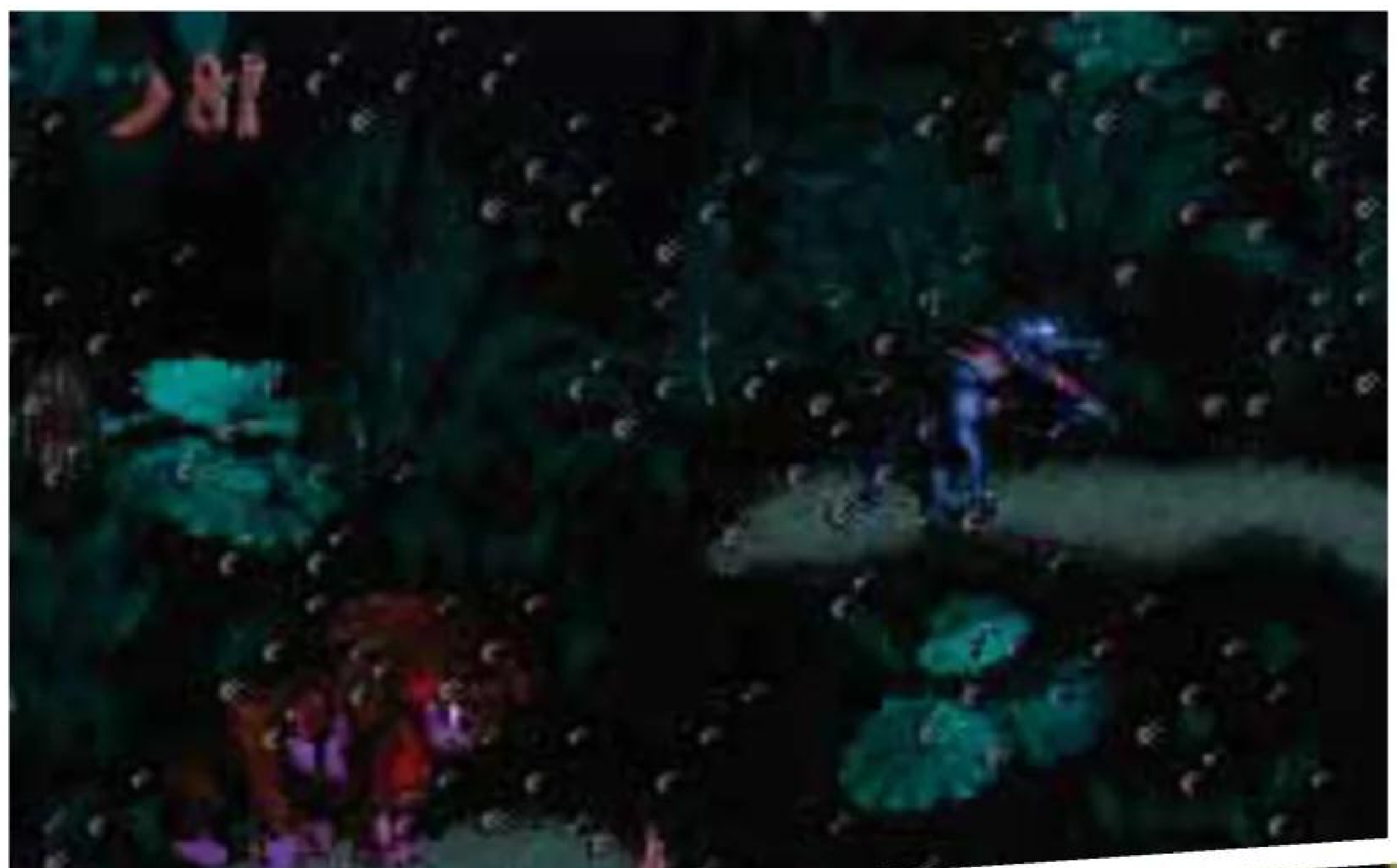


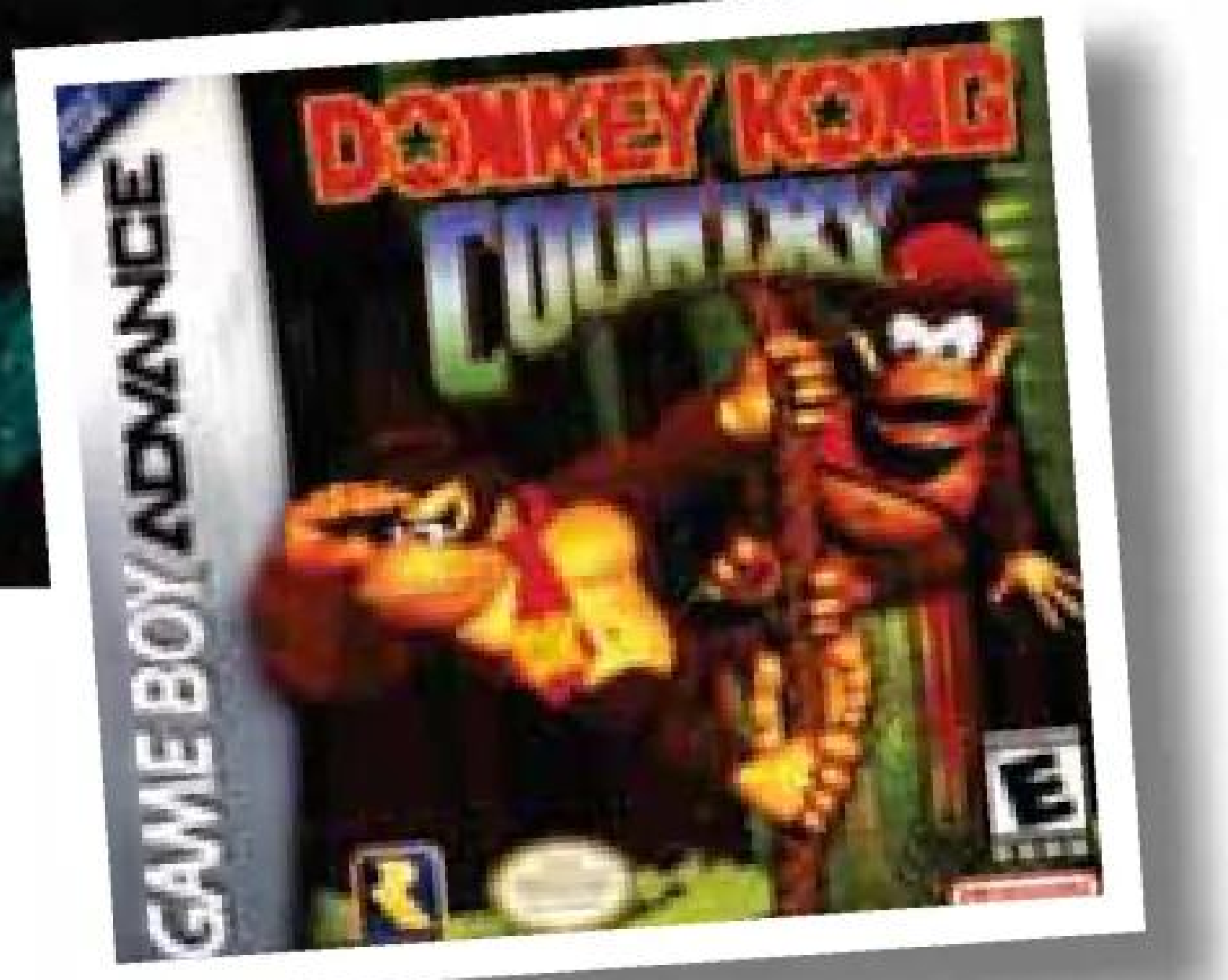


» You can't hear it here, but the water sections of *Donkey Kong Country* sound absolutely incredible.



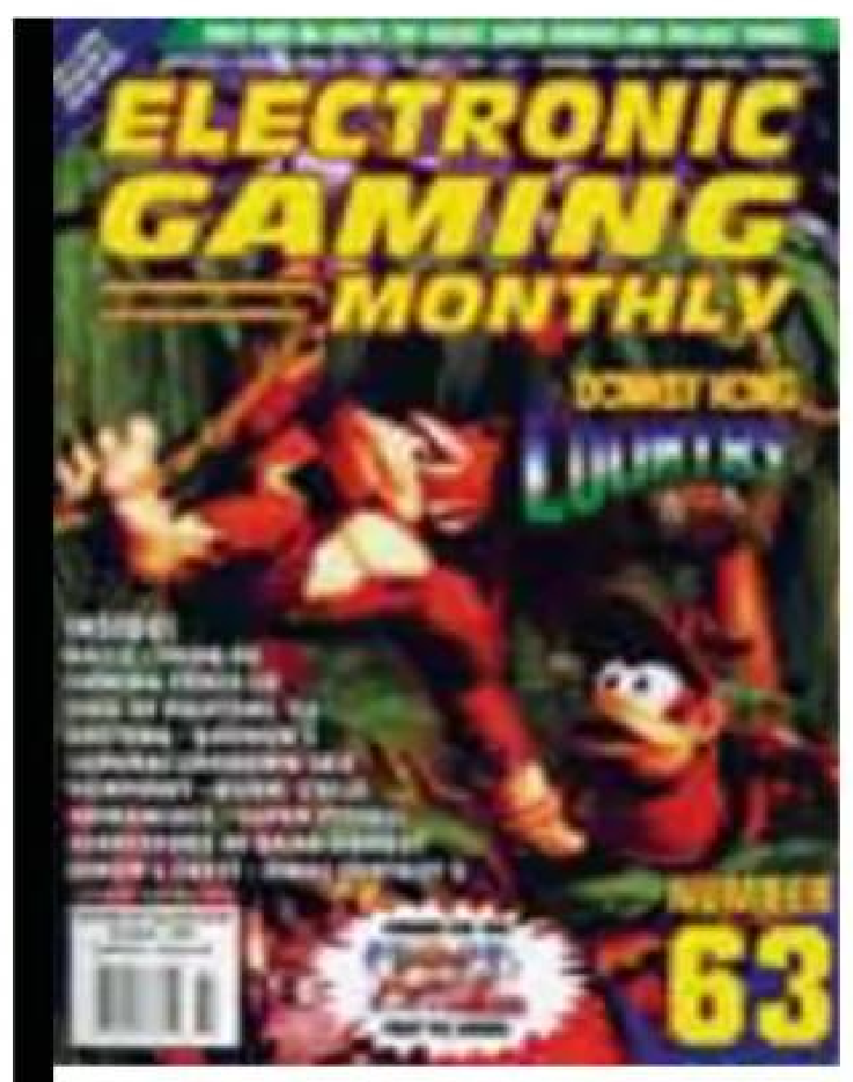
» Barrels were put to good use in the game, offering everything from a friendly ape to rocket propulsion, depending on which one you picked up.





» Even after being sold to Microsoft, Rare would port Donkey Kong Country – and its sequels – to the Game Boy Advance.

WHAT THEY SAID...



Who needs 32 or even 64-bit when Nintendo can keep pulling marvels out of the 16-bit hat? Donkey Kong Country is simply mind-blowing

EGM, 1994

Speaking of Mario, it was reported at the time of development that Shigeru Miyamoto was less than impressed with Rare's efforts, allegedly bemoaning the fact that gamers of the time were dazzled by visuals and not gameplay. Miyamoto himself has publicly refuted this stance in recent years – stating quite correctly that as Kong's daddy, he was intimately involved with the production of the title – but could the graphically stunning *Donkey Kong Country* have caused the famous designer to feel a little jealous, given that he was working on the more visually simplistic *Super Mario World 2: Yoshi's Island* at the time? "I only really know what's been reported on the internet, and we all know that's the best place in the world for finding opinion rather than fact," laughs Brendan when asked about Miyamoto's comments. "I know Miyamoto was passionate about the game during development, and so were the people at Rare, but that doesn't mean we all wanted the same things. Japanese games have some very distinct differences from games in the west, and the brilliant Shigeru Miyamoto has been a big part of the Japanese style. I'm sure he would have made the game very differently, but I'm confident that he must also appreciate some of the qualities that made it stand out from his own games."

> **"I know Miyamoto was passionate about the game during development"**
>
> Brendan Gunn

Deadlines in videogame development are so often dictated by the purchasing habits of players, and Rare was working to a strict schedule with *Donkey Kong Country* – the game had to hit store shelves during the lucrative holiday season in North America. Brendan admits that the team was able to fulfil its objectives in time for launch, but even so, there are things he would like to have spent more time on. "No project ever really feels complete," he says. "I could always go back and keep improving things, but at some point you just have to draw a line under it and let it out into the world. Having said that, the only thing I'm really unhappy about in *Donkey Kong Country* is in the map pages. We have these beautifully rendered map screens with winding paths linking each area of the game, and I just did a lazy straight line path for Donkey Kong to walk along instead of accurately following the path. I'm a little embarrassed by that."

Thankfully the general public didn't seem to pay any notice to the lack of winding pathways, and *Donkey Kong Country* became a runaway hit, shifting almost 10 million copies worldwide and effectively delaying the onset of the next-generation revolution; the game assured SNES owners that there was little sense in dropping an insane amount of cash on a 3DO or Jaguar when their current console was capable of producing such amazing visuals. Two SNES-based sequels would follow, and Brendan worked on both – yet he freely admits that he doesn't hold the same level of affection for them as the trailblazing original. "I worked on both of the SNES sequels, as well as *Donkey Kong 64*," he recounts. "Again for the SNES sequels, I was focused on

>> A GAMING EVOLUTION Super Mario World > DK Country > Clockwork Knight

Shigeru Miyamoto's seminal 16-bit smash hit was a massive influence on practically every 2D platformer.

Sega's Saturn-based 2D platform epic took the 3D rendered visuals of *Donkey Kong Country* to the next level.

the graphics, and I continued to refine some of the techniques I'd used in the original. I was particularly pleased with the 3D effect inside the flooded ship – I can't even remember whether that was *Donkey Kong Country 2* or *Donkey Kong Country 3*. The dripping honey effect in *Donkey Kong Country 2* was quite satisfying, too. Although the sequels were more polished in a number of ways, I don't look back on them with the same fondness as the original. I just don't really like retreading old ground."

Nevertheless, Brendan's involvement with the *Donkey Kong Country* series would have a dramatic impact on his life thanks to the bonus scheme that Rare operated during his tenure with the company, which ensured that staff benefited from their hard work should their games turn out to be big sellers. Is it fair to say that these releases changed his life? "*Donkey Kong Country* and its sequels were pretty lucrative, but 'life-changing' is perhaps a little strong," he replies with a chuckle. "I'd definitely say 'life-enhancing'!" Brendan now works outside of the games industry with a design firm in Ashby-de-la-Zouch – a small town just minutes away from Rare's Twycross HQ and the place where Tim and Chris Stamper originally founded the company back in Eighties, under the moniker Ashby Computers & Graphics – and remains very proud of the things he achieved during his time with the studio. "It was great working with so many talented people over so many years, but for me *Donkey Kong Country* was the pinnacle. The best part was working with such an amazing team." ✱

CONTINUATION OF KONG

The line of Nintendo's infamous ape didn't end with Rare

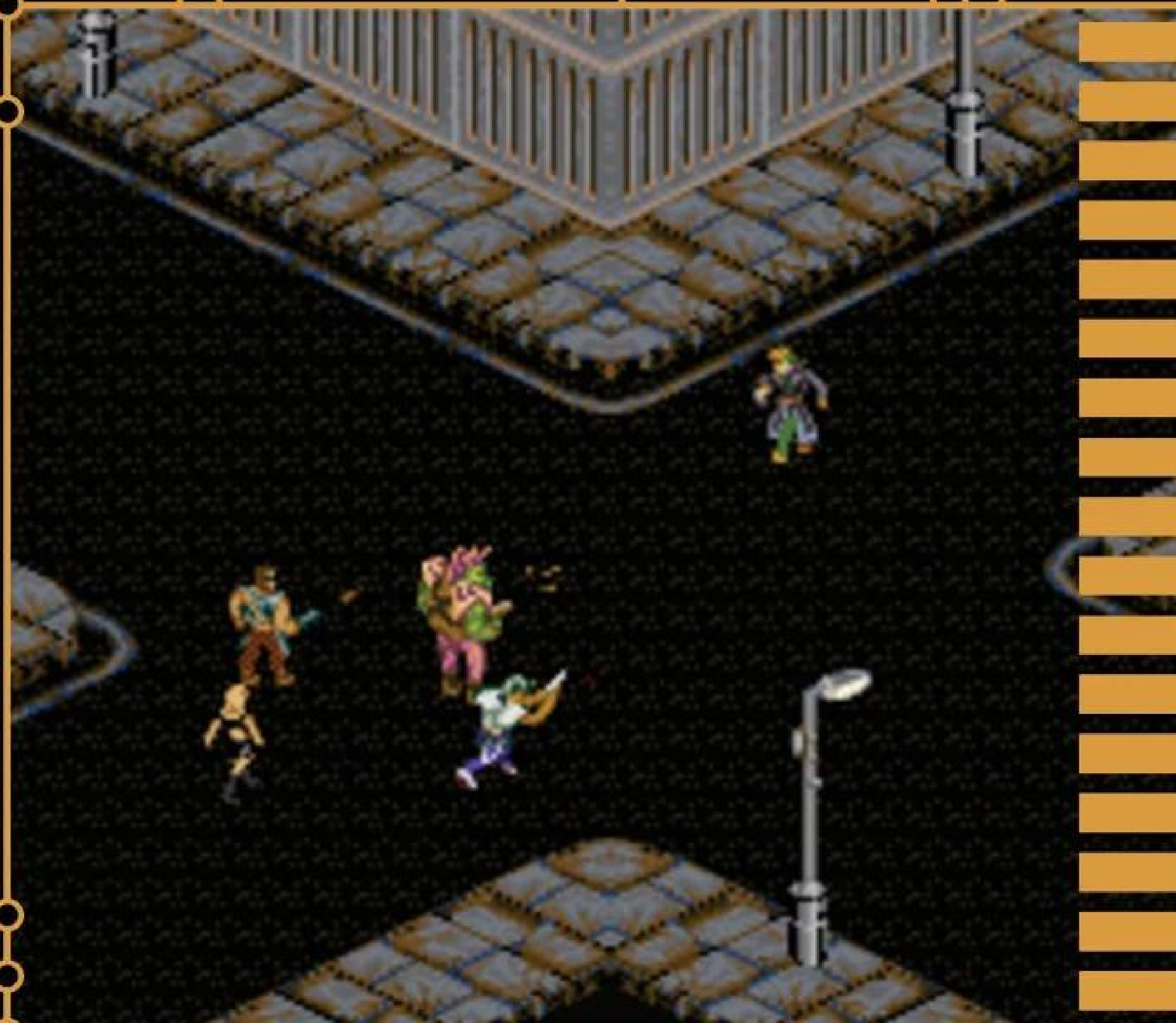
When Microsoft purchased Rare it drew a line under the studio's involvement with the Donkey Kong character it had done so much to revitalise. However, it thankfully didn't mean the end of the *Donkey Kong Country* series, as in 2010 Nintendo enlisted Texas-based Retro Studios to create *Donkey Kong Country Returns* for the Wii. It was a critical and commercial success and managed to capture much of the magic of the originals – a remarkable achievement when you consider that Rare wasn't involved in its production. The game would be ported to the Nintendo 3DS in 2012 by Monster Games, and Retro would return to the series in 2014 with *Donkey Kong Country: Tropical Freeze* on the Wii U (which was later re-released on Switch).

» *Donkey Kong Country* was rebooted for the Wii in 2010 as *Donkey Kong Country Returns*. A Wii remaster in 2014 added Cranky Kong.

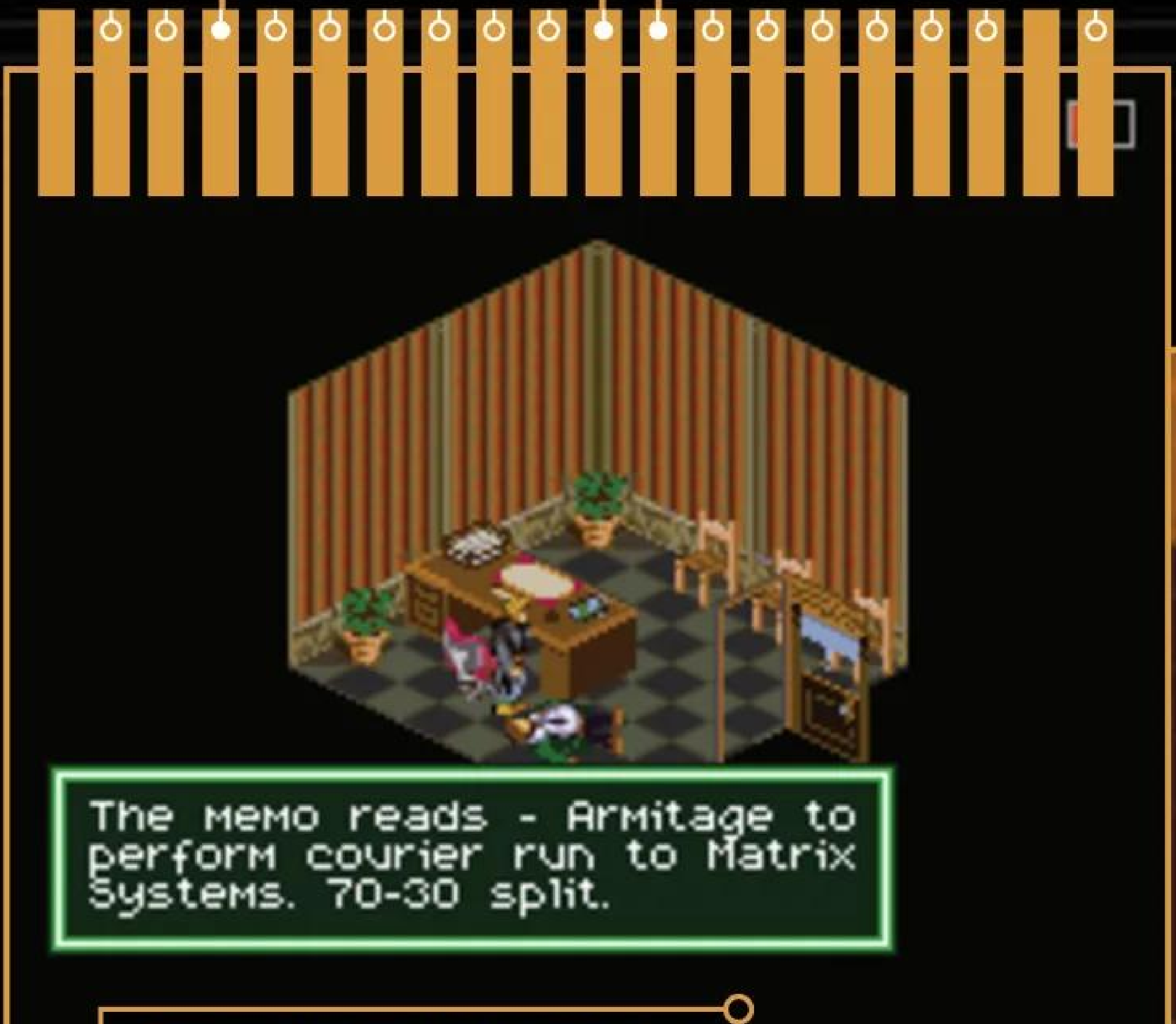
It pushed the SNES's capabilities to its limits and had a fanbase eagerly awaiting an adaptation of their beloved tabletop RPG. Denis Murphy breaks down the story behind a cyberpunk classic

The year 2013 saw the release of *Shadowrun Returns,* one of the many videogame success stories that have emerged from the creation of Kickstarter. However, though Hairbrained Schemes has brought its vision of *Shadowrun* to fruition 24 years after its creation as a tabletop RPG, Beam Software created the first videogame incarnation of *Shadowrun* for the SNES back in 1993, a title that blended both the RPG and action genres – as well as reality and the virtual world. Originally pitched by Gregg Barnett in conjunction with Jordan Weisman of FASA, and accepted by Data East, *Shadowrun* was in limbo during some of its development due to his sudden departure from the project. With Gregg notably absent, the game was heavily reworked during development, as one developer puts it, "to make it actually achievable." After slightly deviating from Gregg's original vision for it to have a "strong noir look", one major change to the gameplay was the removal of the ability to use a motorcycle to traverse the city. Instead, a train system was implemented, thus cutting down on excessive sprites – a problem that was persistent during the game's development.

Despite seeing changes throughout development from Gregg's originally accepted pitch, the main focus of *Shadowrun* remained; to deliver a game that both fans of the tabletop RPG and newcomers could enjoy. Game designer on the project after Gregg departed, Paul Kidd, reveals his appreciation of tabletop RPGs, "I'm a

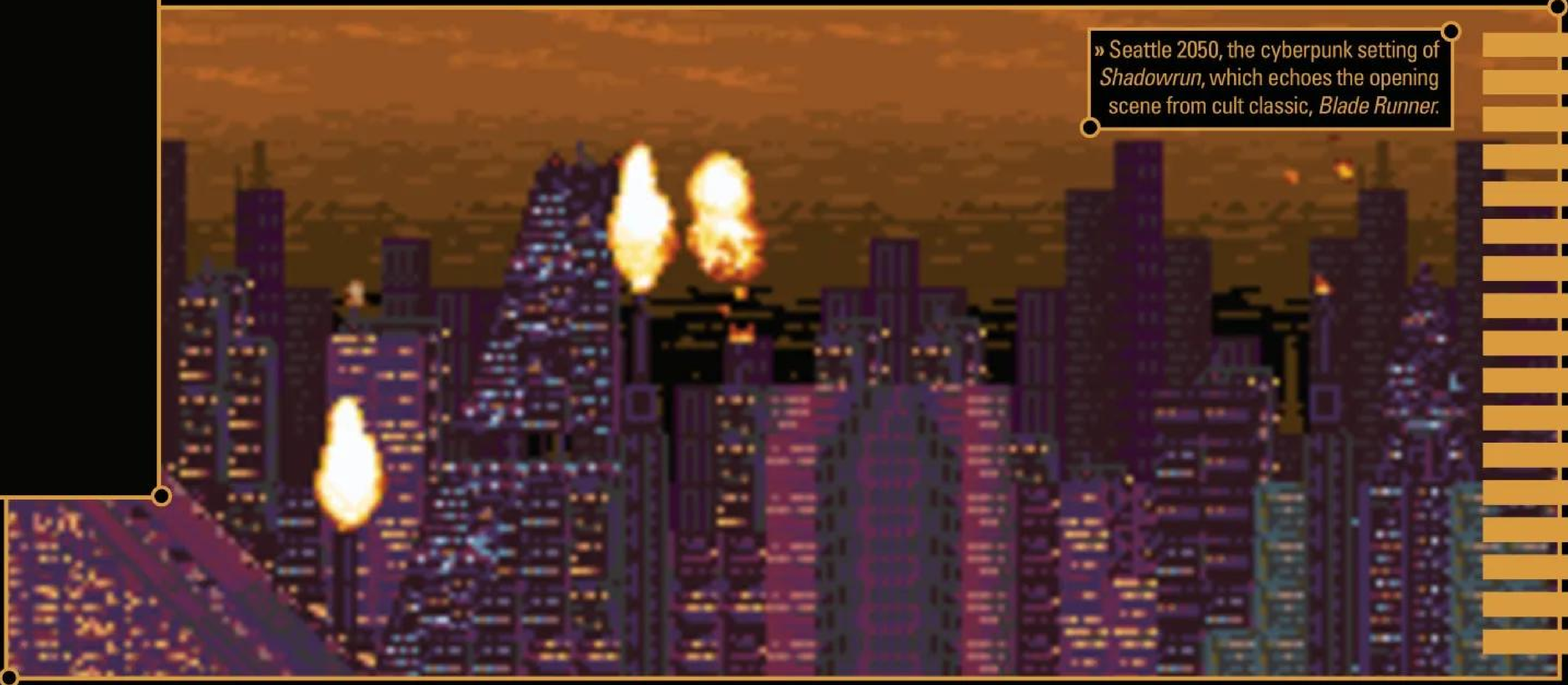


» At *Shadowrun*'s beginning, Jake the hero, is gunned down. Your job is to find out why.



The memo reads - Armitage to perform courier run to Matrix Systems. 70-30 split.

» There are clues throughout the game alluding as to why you were put on a hit-list.



» Seattle 2050, the cyberpunk setting of *Shadowrun*, which echoes the opening scene from cult classic, *Blade Runner.*

long time RPG enthusiast. I knew of the *Shadowrun* game (though at that time, I wasn't a player myself). I had my own RPG games published out in the marketplace (*Albedo*, *Lace & Steel*), so I wanted to do a good job for my fellow RPG fans." Despite admittedly not being an active player of *Shadowrun* himself at the time, Paul instantly saw the possibilities that the universe offered and was determined to get its videogame translation correct. "It offered a chance to do adventures that operated on both the physical level, and also on the plane of cyberspace," he explains. "Plus, most adventures up to that point had been about individual characters. *Shadowrun* was about assembling teams." With the team assembled and a tabletop RPG fan as its lead, *Shadowrun*'s development went into full swing.

The game opens in Seattle, Washington in the year 2050, amid a sprawling cyberpunk backdrop. The story to *Shadowrun* was simple, yet effective. After being gunned down and left for dead, the player takes command of courier Jake Armitage and must find out who the mysterious 'Drake' is, the individual who ordered his execution. However, the first issue was whether the world the original tabletop RPG envisioned could be physically realised within the confines of a simple SNES cartridge.

Creating *Shadowrun*'s world was no easy task. The choice to present the game from an isometric perspective was, in part, picked to give the illusion of a fully 3D world, seeing as such an environment on the SNES wasn't feasible at that time. As system programmer Andrew Bailey puts it, "We wanted the game to be in 3D, not top-down as in other RPGs. A room-based isometric view was designed. The overall graphical design was highly tailored by the systems hardware, including the scrolling of two screens and also the number of levels of items that could be overlapped." For a game with its feet placed firmly in the realm of a rule-based tabletop RPG, Beam Software looked to Justin Halliday, who served as map constructor on the project. "To be honest, there wasn't really an approach or a plan," he recalls. "Between us, Andrew Buttery and I were in charge of making all of the maps for the game. As is always the case, we were working on the maps at the same time the game engine and the map design tool were being created." Also praising the freedom given to him during development, Justin says, "Most of the time, we were given a great deal of freedom to create the maps. We worked with the artists on elements for each of the areas, like the city streets, the docks or the ship. The most important thing was for us to try to find new and interesting ways to use the limited artwork we had."

Despite limitations, Justin found realising the world of *Shadowrun* on the SNES rather frustrating, lamenting, "We were always under the pump on *Shadowrun*, and lots of parts of the game were thrown together, cut out, or bodged together! We were always running out of memory, and we begged the publisher for a 12 megabit cartridge but they wouldn't commit to the extra memory. So, the artists would be constantly revising all of their artwork to reduce the character counts. That's why the helicopter at the volcano is viewed front-on, so we could flip the left and right sides, and why all of the baddies have the same corpse…" Though *Shadowrun* did have a number of its character and enemy sprites downgraded which impacted the game's intended visual flair, Justin is eager to call both the actual engine and the in-game tools "fantastic".

Exit
Talk
Ask about…

IN THE KNOW

» **PUBLISHER:** DATA EAST

» **DEVELOPER:** BEAM SOFTWARE, LASER BEAM ENTERTAINMENT

» **RELEASED:** 1993

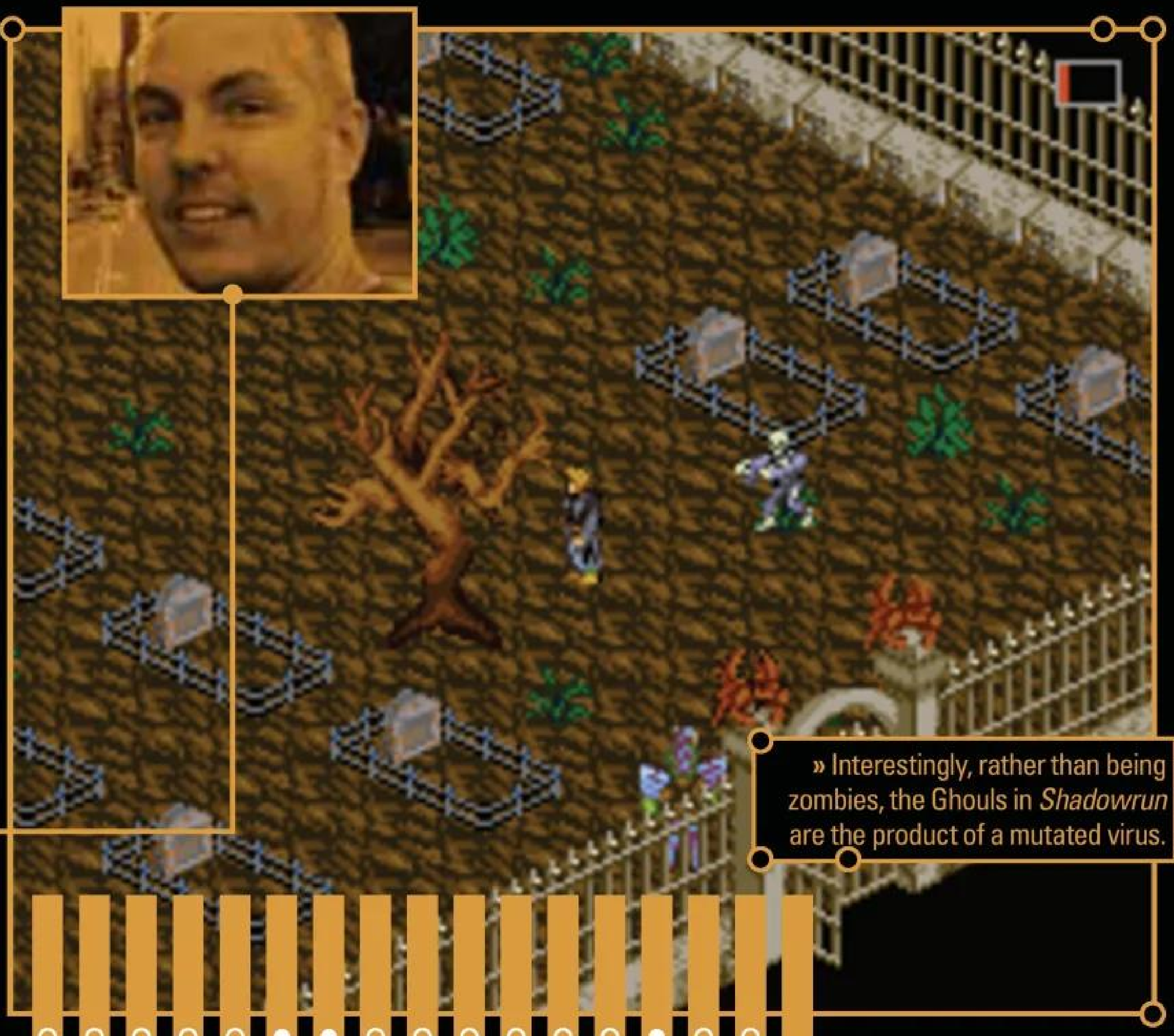
» **PLATFORM:** SNES

» **GENRE:** ACTION-RPG

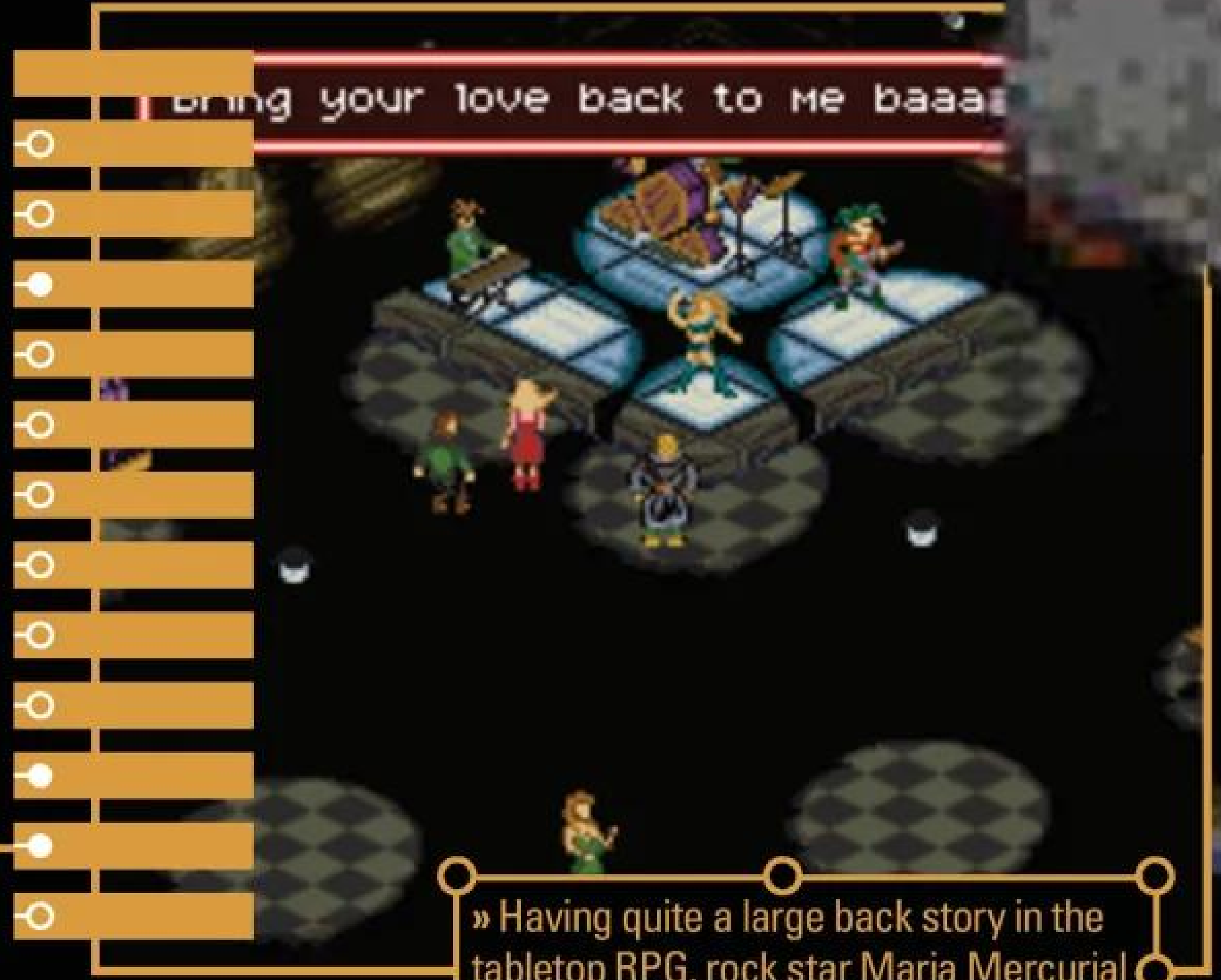
Being one of two programmers behind the project, and also responsible for architectural design and the PC tools which allowed for world building, Andrew explains how he and his fellow programmer worked their way around certain graphical limitations.

"The SNES did not provide an arbitrary bitmap rendering system as is common today, but used a system of character generators and sprites," he begins. "This meant the backgrounds had to be built on a rigid 64 by 32 grid of eight by eight cells. The hardware provided three layers with which characters (implemented using sprites) could move, but this wasn't enough. We used a special hardware trick called 'sprite masking' which was actually a hardware bug that let us cut holes in sprites where the characters were, so we could make a sprite appear to go behind a pillar for example. This required a complex database, so the PC tool allowed designers to construct levels from modular parts from the artists and build 3D information (floor is flat, wall is upright etc). The levels would then be compiled into a single database so that all the graphic information could be shared in a virtual character set. The runtime building of the levels from this database was written by Darren Bremner, all in glorious assembler code." Additionally, Andrew goes on to elaborate on how the game was put together. "All the game systems were written in assembler code, and most other

> **"I wanted to do a good job for my fellow RPG fans"**
>
> Paul Kidd



» Interestingly, rather than being zombies, the Ghouls in *Shadowrun* are the product of a mutated virus.



Bring your love back to me baaa

» Having quite a large back story in the tabletop RPG, rock star Maria Mercurial makes a brief appearance.

games for the SNES were completely written in assembler code. There was little use of languages such as C, due partly to the little runtime RAM available. There was only 128K of RAM into which [we could] decompress art and audio, as well as run the game and its logic. However, we didn't want to have to write all the game logic in Assembler, it would be too error prone and tedious. As other languages were heavy on RAM usage we designed our own language, which we compiled to a virtual stack-based code that the runtime code would interpret and execute. The language was designed so the compiler could pre-compute the *exact* workspace size (or stack) a script would need down to the byte, so the runtime could allocate exactly the space required (a concept I learnt from work with transputers). This let us us run multiple scripts for all the characters in a scene in very little space, a few K. I wrote the compiler and Darren wrote the runtime."

As far as citing inspiration for *Shadowrun* beyond its obvious source material, all three developers come to the same conclusion – William Gibson's classic 1984 cyberpunk novel *Neuromancer*, the novel that defined the cyberpunk genre. Justin elaborates, while also mentioning another somewhat unlikely source of inspiration, "There's a huge amount of *Neuromancer* in *Shadowrun*, as there was in all of the cyberpunk genre. The other influence that players have probably noticed was *Minesweeper*, the time-killing puzzler that shipped with Windows. When it came to the hacking mini-game, no one could think of how to do it until someone came up with the idea of using *Minesweeper*'s mechanics for the hacking."

Beyond the cyberpunk city setting, the player also had the ability to enter the 'Matrix', a virtual world within *Shadowrun* accessible using a cyberdeck. Created primarily by Graeme Scott, it was presented to be visually different from the main game and featured a new style of gameplay to emphasise the gulf between the real world and this virtual cyberspace. Paul notes, "We had to keep it as simple as possible, given the time constraints and the memory constraints of the machine." Yet despite talk of the system's shortcomings to a certain degree, Andrew was quite confident that it could handle *Shadowrun*. He recalls, "The SNES was a great machine, especially after working on its predecessor the NES. Its very non-orthogonal hardware always made it a challenge on how to design a game around it. It was probably the most powerful graphic chip of its type, even compared to the AGB. It not only had a CPU whose speed was measured in the low MHz but a host of special DMA tricks (giving us the famous Mode 7) and excellent audio that, for the first time, allowed a musician to actually compose real music for a videogame. Overall, the SNES allowed us to deliver a console game which, for the time, didn't have to comprise on its quality due to hardware limitations."

However, there is one side to this story that will never be told again, and that is the first-hand account of Arthur Kakouris, project manager and additional game designer on the project. Arthur Kakouris passed away in September 2012, and the man who was known as 'Artie' is sadly missed and not forgotten. Justin reflects: "Arthur was a great friend, especially during *Shadowrun*. He was the sort of producer and designer who put everything into the game, and made it a pleasure to work on. We'd go out at 11pm for Slurpees for the team, and head to Pizza Hut every Tuesday for all-you-can-eat pizza. Unfortunately, he was born with a heart defect and had open-heart surgery when he was around 20. Last year his heart finally gave out and he died." Paul also chimes in with his thoughts on the passing of a friend, telling us, "Arthur was a deeply serious and dedicated guy. What I loved about him was that you could just discuss an idea with him and let him go – he'd work away at it and something good would result." Andrew also shares his memories, and believes that *Shadowrun*

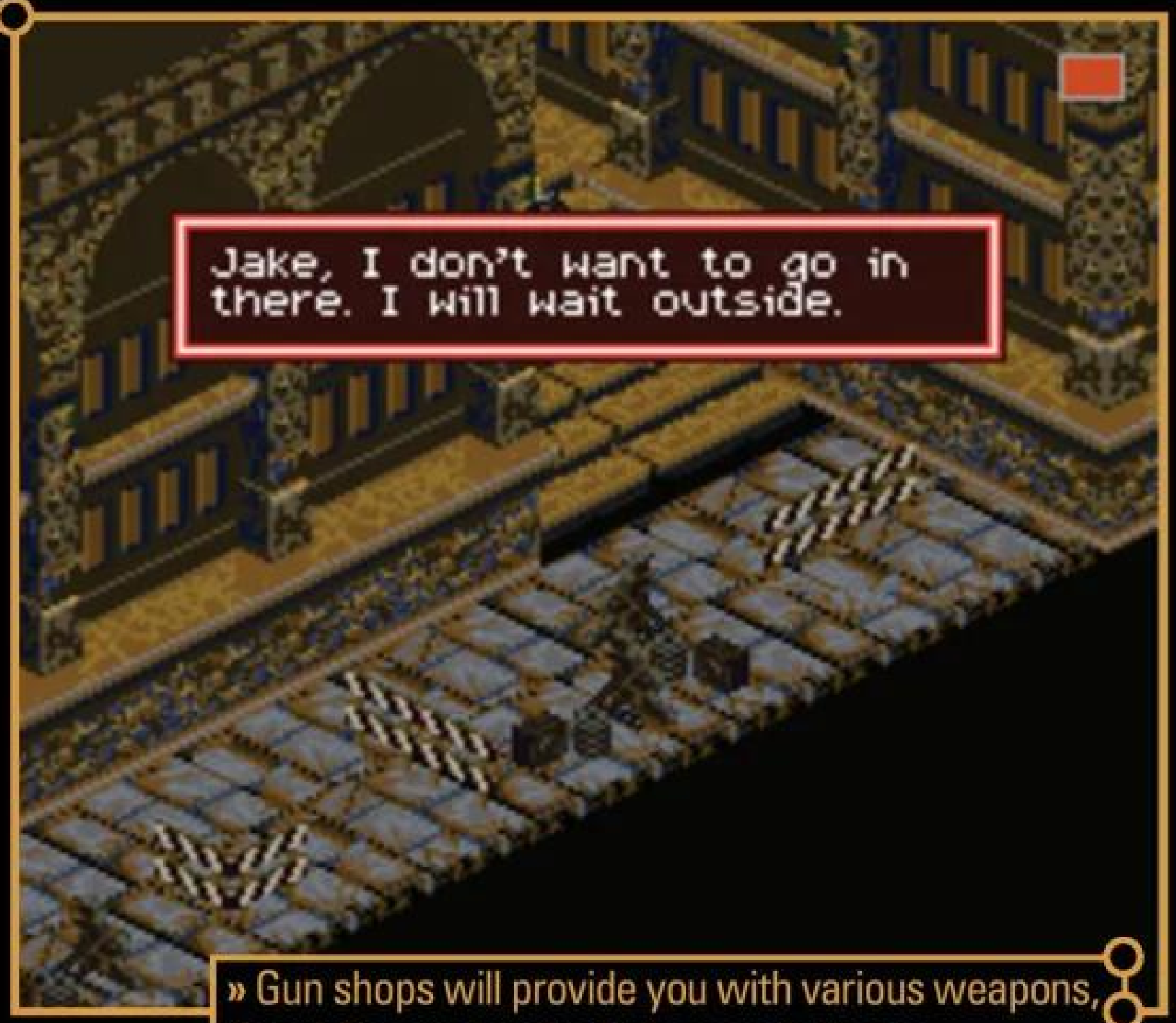
> "Arthur did what he loved best, and that was game design"
>
> Andrew Bailey

DEVELOPER

THE MUNCHER
(PICTURED)
SYSTEM: C64, ZX SPECTRUM
YEAR: 1988

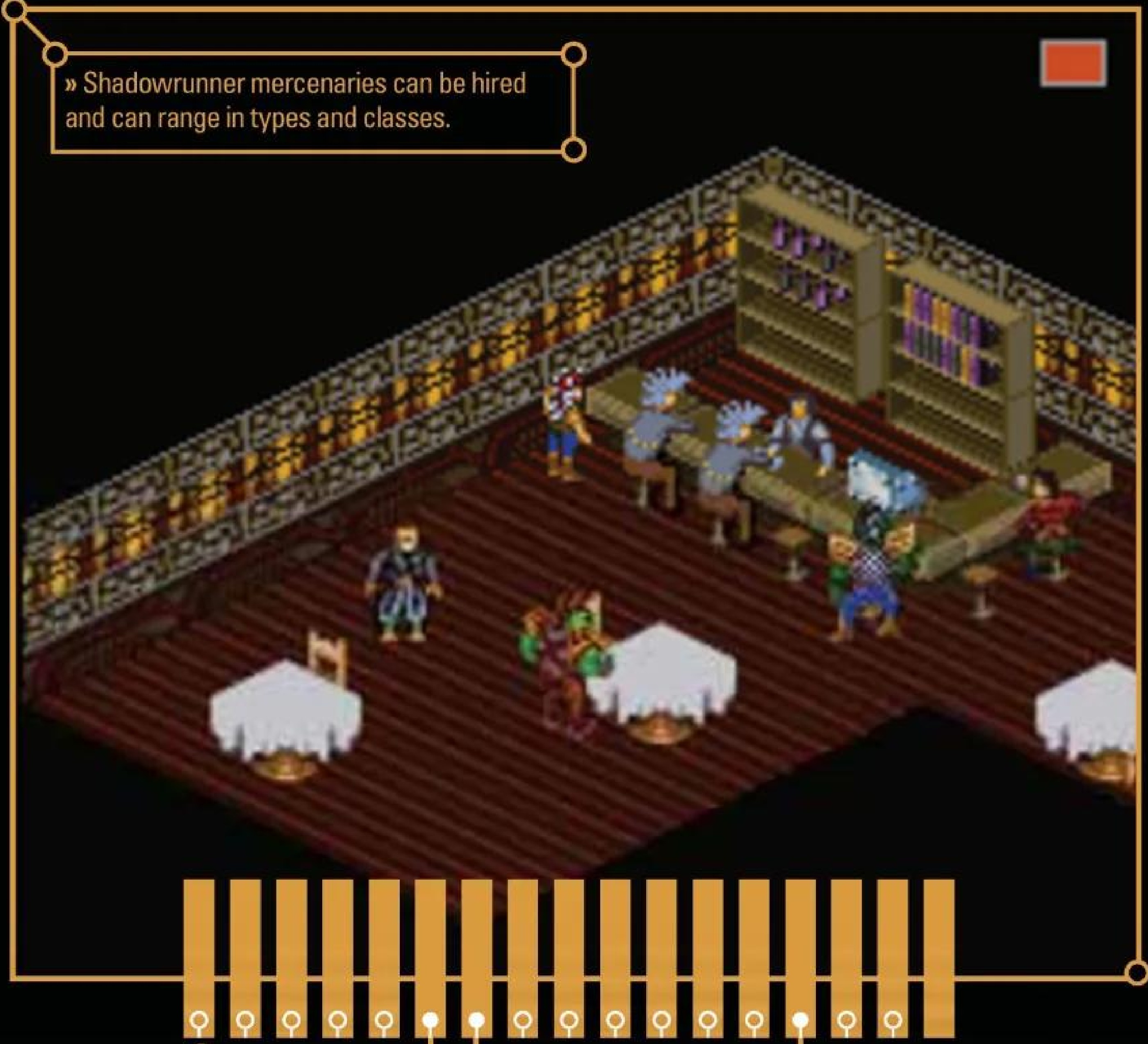
THE WAY OF THE EXPLODING FIST
SYSTEM: VARIOUS
YEAR: 1985

THE HOBBIT
SYSTEM: VARIOUS
YEAR: 1982

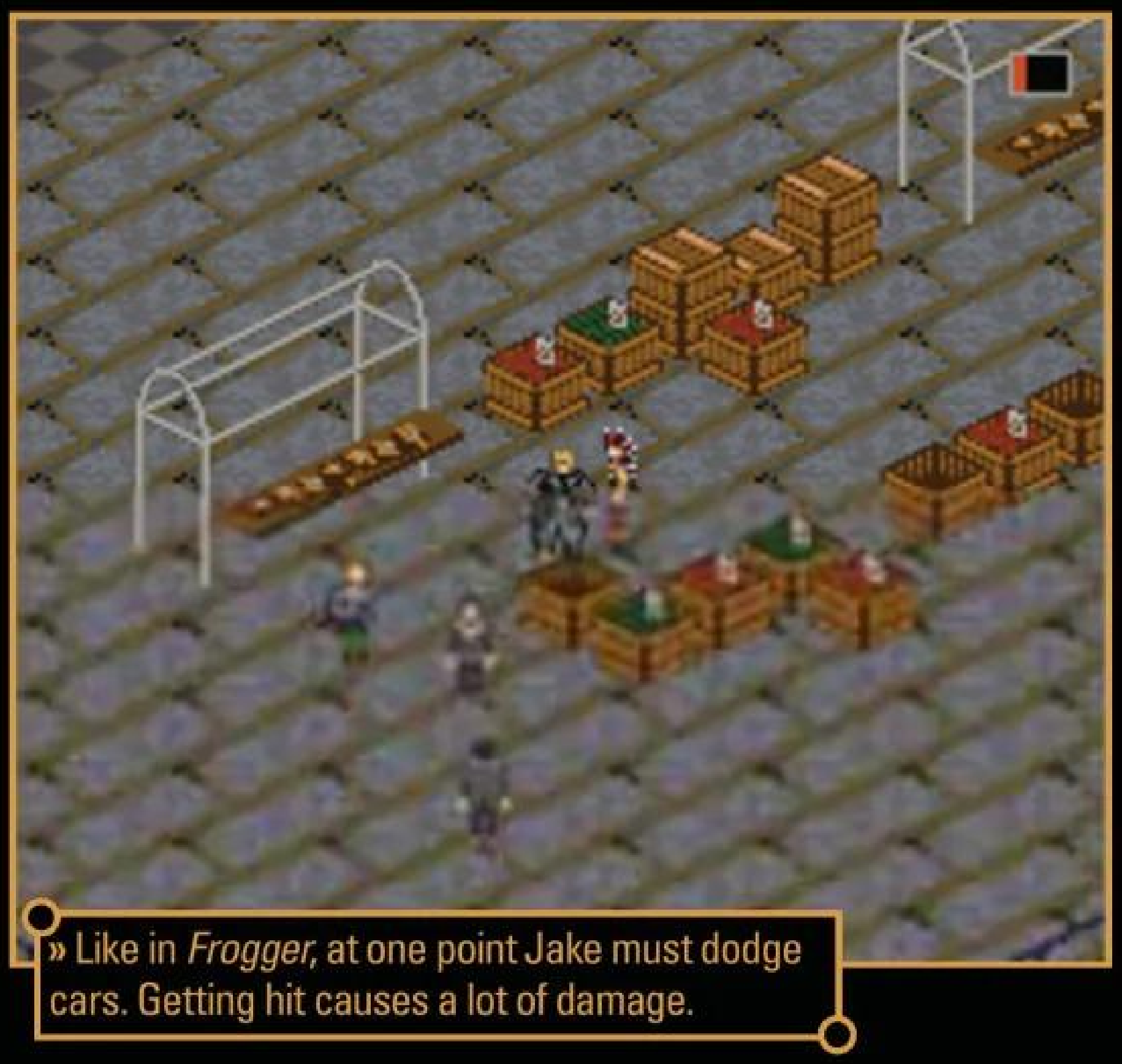


Jake, I don't want to go in there. I will wait outside.

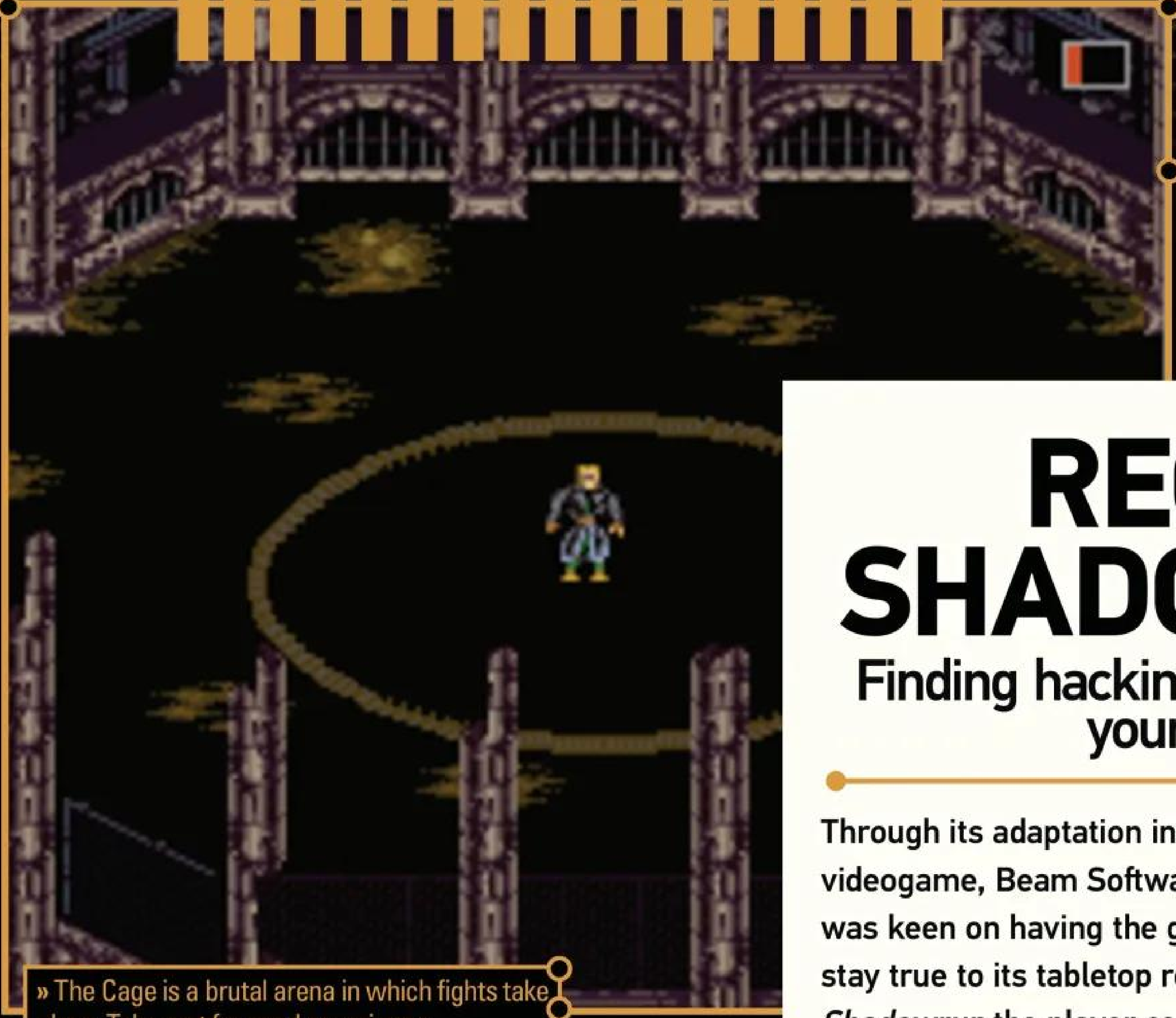
» Gun shops will provide you with various weapons, if your firearm level is high enough, that is.



» Shadowrunner mercenaries can be hired and can range in types and classes.



» Like in *Frogger*, at one point Jake must dodge cars. Getting hit causes a lot of damage.



» The Cage is a brutal arena in which fights take place. Take part for good experience.

meant quite a lot to Arthur. "Naturally I was deeply shocked and upset with Arthur's passing last year, as Arthur joined myself and Trevor Nuridin as an owner of Tantalus Entertainment over one-and-a-half decades ago. This was compounded by the fact I was on the other side on the world and couldn't attend his funeral. On *Shadowrun* Arthur did what he loved best, and that was game design. I believe he would have remembered [it] as one of the best projects he worked on."

A year after Beam Software released *Shadowrun*, another *Shadowrun* title hit the shelves, this time developed by BlueSky Software for the Sega Mega Drive, which was then followed by a Japanese take on the franchise in 1996 by Compile. It seems Beam Software hit a timely nerve but, despite a fantastic critical response to its *Shadowrun*, a direct sequel never materialised. In fact, despite a post-credits message promising a sequel, the team were adamant that it was never seriously discussed. Andrew does interject with a revealing story though, "The Japanese version was interesting. This was because it came to be proposed after we had finished the English version, and we were presented by the Japanese publisher with a big printout where they had reverse engineered the VRAM (graphic memory) for all the different screens, working out where the Japanese font could be fitted in. While it was an impressive piece of work, we didn't have the heart to tell them it was useless. This highlighted a difference between how we in the West (or South for Beam) worked differently to the East. While they allocated the space for the art by hand, we wrote systems to do this in code, so we simply added the Japanese font to a table and it was done."

As these three developers reminisce about their game, we had to ask, are there any secrets in *Shadowrun* that no one knows about? Surprisingly, two of them speak up. James lays out what hasn't been discovered for 20 years, saying "There is a cheat in the game, but I can't remember exactly how to do it. Basically, there is a flickering streetlight in the first street area after you wake up in the morgue. If you examine the Matchbox four times around the flickering light, you're teleported to a cheat room that contains a bunch of upgrades and gives access to all of the levels." However, Andrew also jumps in with an alternate take on it all: "There is an Easter Egg in the game, a certain dance around a lamppost in the main square that was put in for QA. I wish I could remember the actual cheat, but it is now 20 years ago." Conflicting accounts, certainly, but now a secret best explored by the retro gaming public…

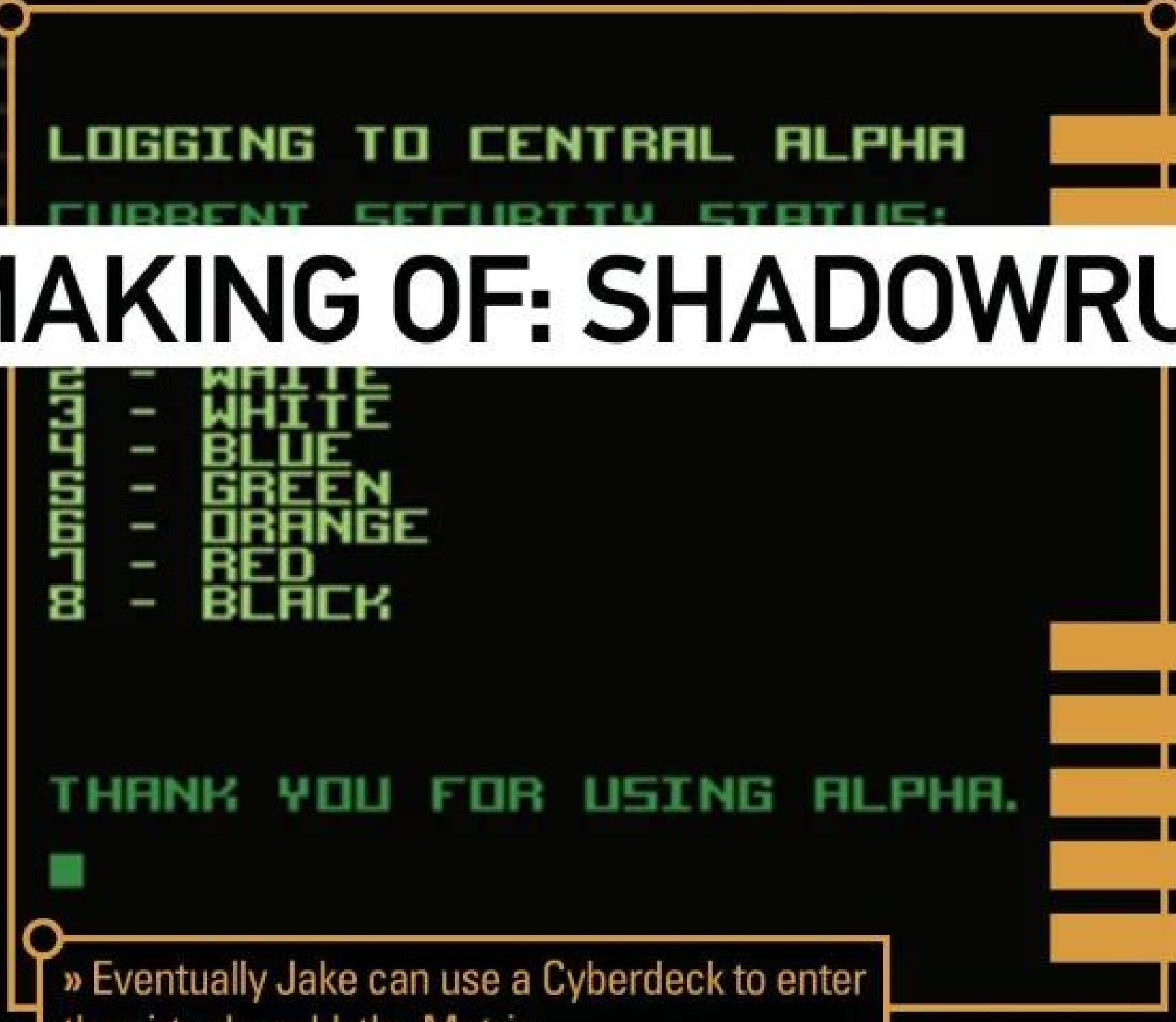
26 years on, *Shadowrun* remains one of the SNES's strongest and most memorable Western titles, and certainly its best RPG. It combined a wonderful narrative, a gorgeous cyberpunk-laden setting and tied diverse and interesting gameplay together in one neat little package. Looking back, how do these developers view their work?

"I actually really like what we did," Paul remarks. "As other people produced games in following years, I could see the influence of *Shadowrun* through many of them." Justin also backs up Paul's feelings on the game, saying, "I'm still amazed we actually finished the game! We were a young team and were fortunate to be given the opportunity to work on a game that went on to become a minor classic!" Andrew on the other hand simply commends the efforts of all involved, intimating, "I regard *Shadowrun* as one of the best projects I have worked on. I think this is mainly because the entire team was really into the game and the concept and went that extra mile on each aspect of the game – design, art, scriptwriters and QA." It would appear that Hairbrained Schemes' new *Shadowrun* game has a lot to live up to… ✱

RECRUITING SHADOWRUNNERS

Finding hacking too difficult? You need to get yourself some friends…

Through its adaptation into a videogame, Beam Software was keen on having the game stay true to its tabletop roots. In *Shadowrun* the player could hire other Shadowrunners as backup throughout the game. They could be found in the many dingy bars of Seattle, and if a Shadowrunner died, they re-spawned back at where you found them. This let players experiment with different combinations, without the penalty of losing a potential ally forever. This addition of building up a team paid homage to the group-style gameplay of the tabletop RPG. The number that could be hired, and the length of time that they could stay with you, was dictated by the player's Charisma level; if your level was higher, you could save money on Shadowrunner hires. Additionally, there was one ally that would try and kill the player, resulting in quite an unexpected confrontation for unaware players.



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LOGGING TO CENTRAL ALPHA
CURRENT SECURITY STATUS:
2 - WHITE
3 - WHITE
4 - BLUE
5 - GREEN
6 - ORANGE
7 - RED
8 - BLACK

THANK YOU FOR USING ALPHA.
```

» Eventually Jake can use a Cyberdeck to enter the virtual world, the Matrix.

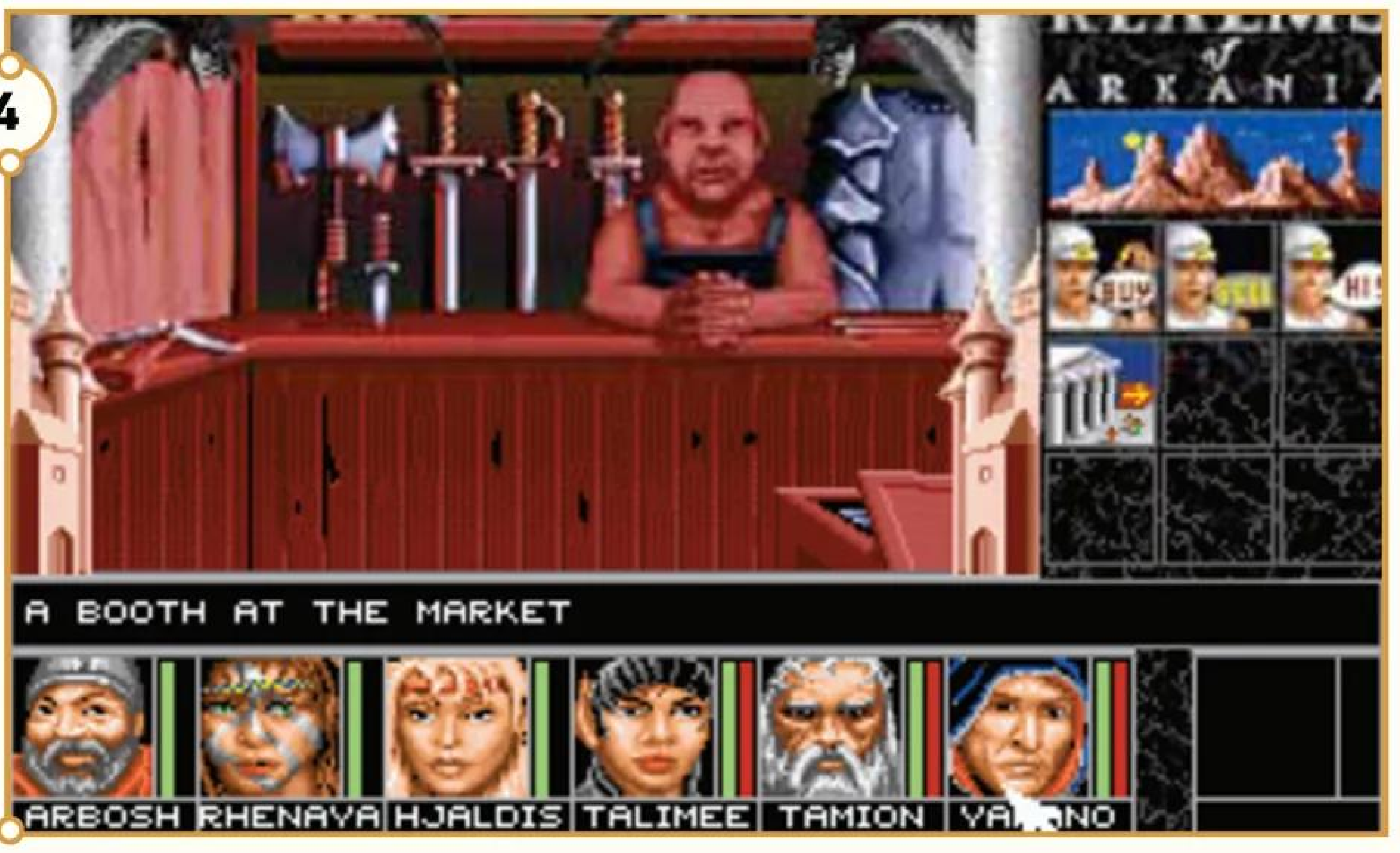
» Some areas of *Shadowrun* are safer than others, but it remains a generally dangerous place.

Ahhh, he's flatlined out.

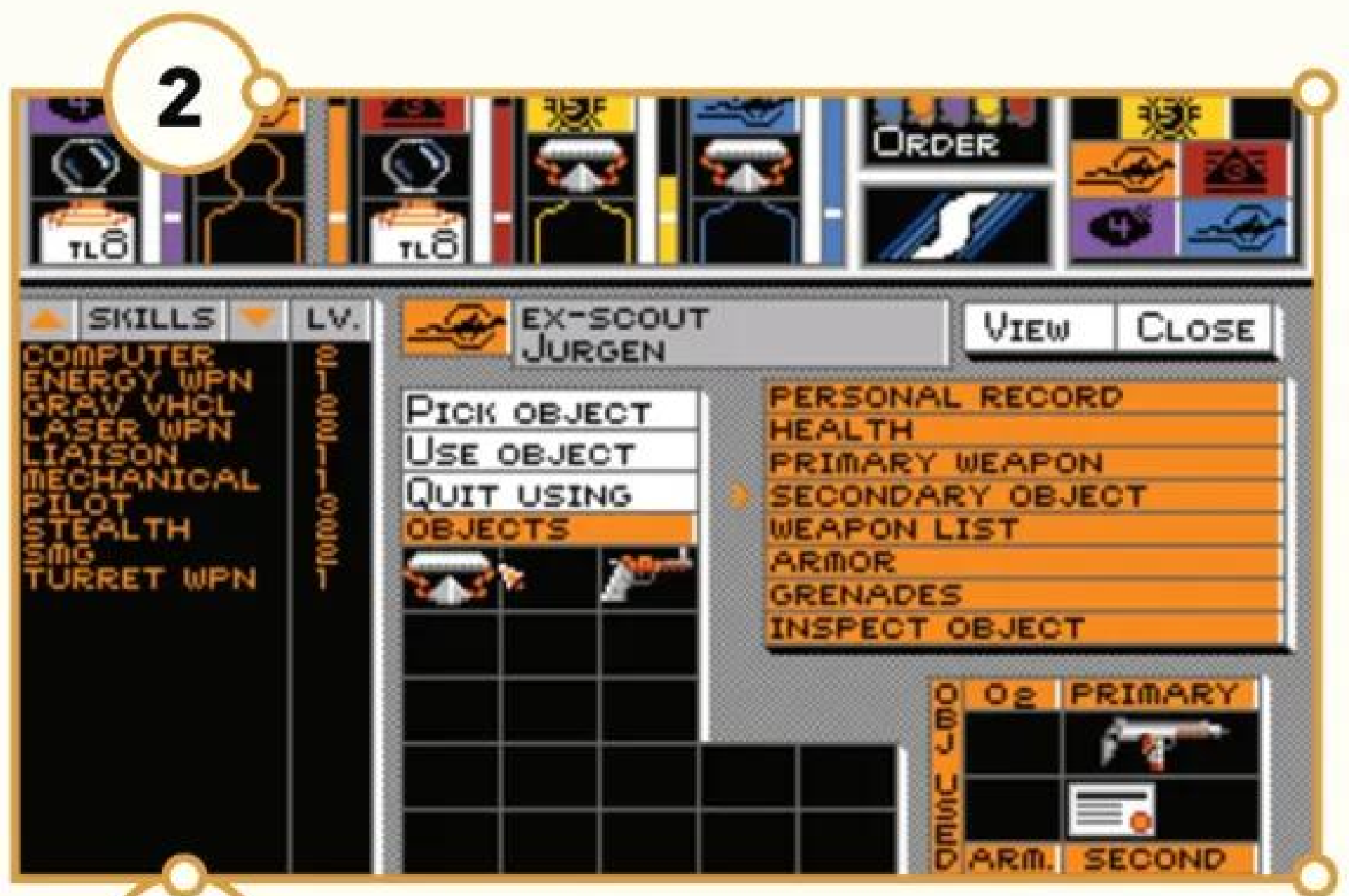
» Waking up in a morgue instantly sets the tone for Beam Software's game.

FROM TABLE TO COMPUTER

More classic RPGs that became fully-fledged videogames


4

REALMS of ARKANIA
A BOOTH AT THE MARKET
ARBOSH
RHENAYA
HJALDIS
TALIMEE
TAMION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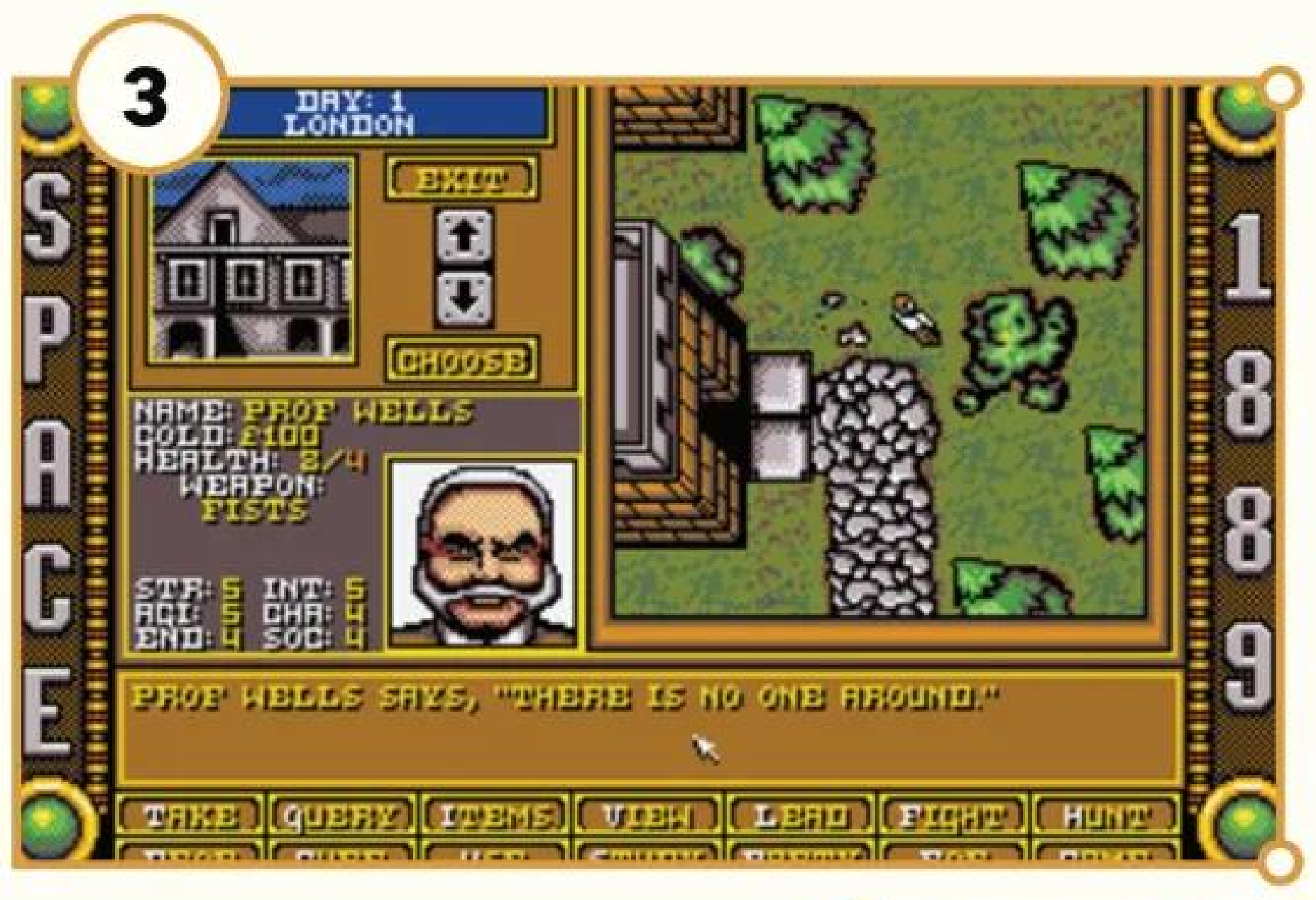
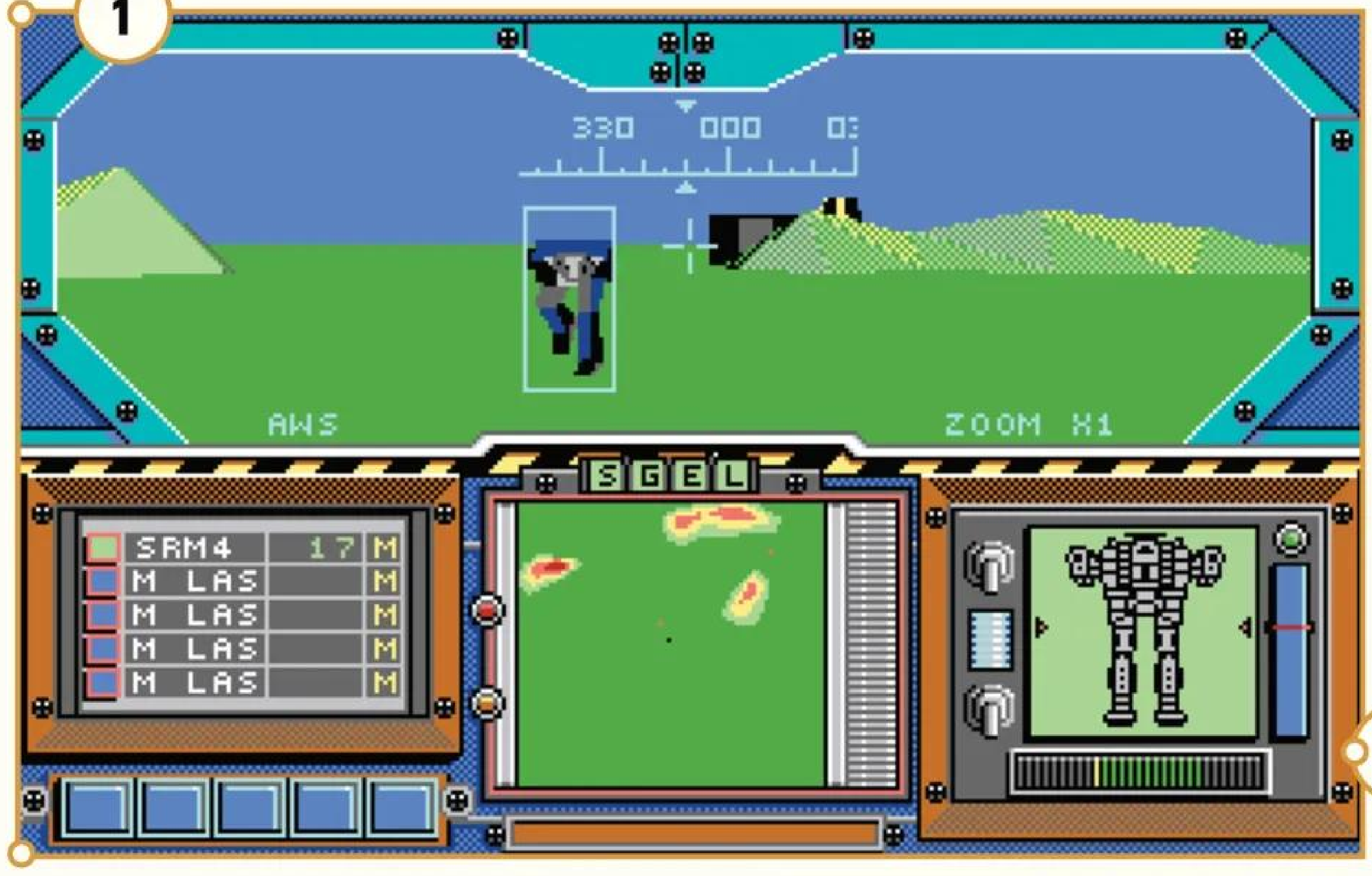
ORDER
SKILLS
LV.
EX-SCOUT JURGEN
VIEW
CLOSE
COMPUTER
ENERGY WPN
GRAV VHCL
LASER WPN
LIAISON
MECHANICAL
PILOT
STEALTH
SMG
TURRET WPN
PICK OBJECT
USE OBJECT
QUIT USING
OBJECTS
PERSONAL RECORD
HEALTH
PRIMARY WEAPON
SECONDARY OBJECT
WEAPON LIST
ARMOR
GRENADES
INSPECT OBJECT
PRIMARY
ARM.
SECOND


3

SPACE
1889
DAY: 1
LONDON
EXIT
CHOOSE
NAME: PROF WELLS
STR: 5
INT: 6
TAKE
QUERY
ITEMS
VIEW
LEAD
FIGHT
HUNT

PROF WELLS SAYS, "THERE IS NO ONE AROUND."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ZOOM X1
SGEL
SRM4
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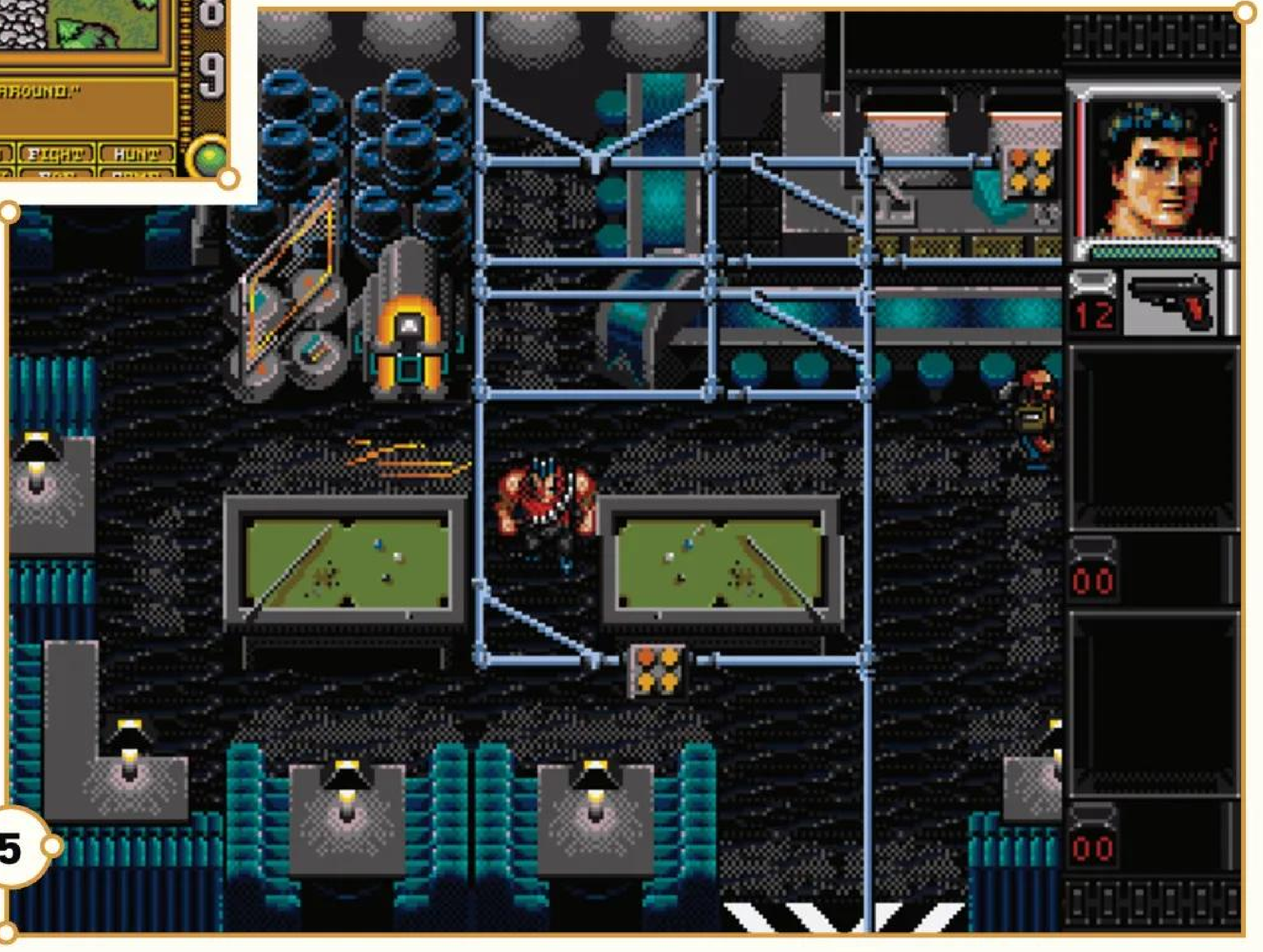
M LAS
M LAS
M LAS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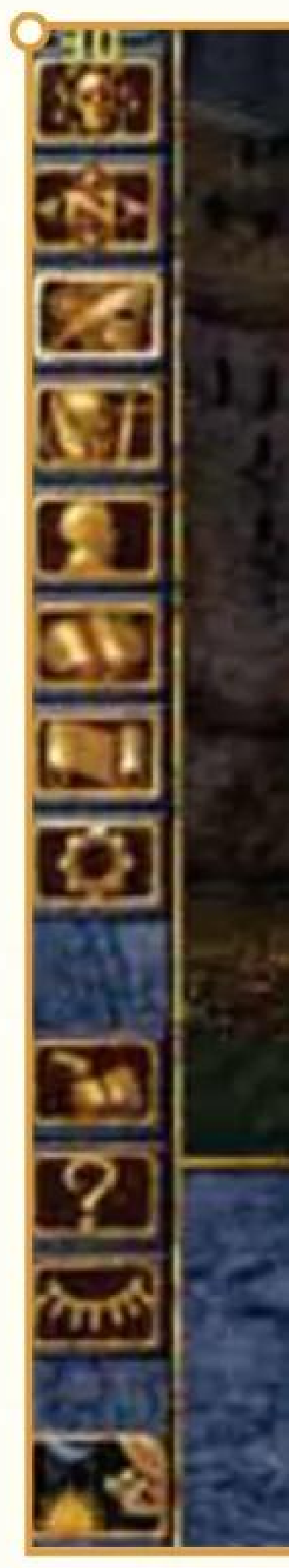

MECHWARRIOR

DEVELOPER: DYNAMIX
PUBLISHER: ACTIVISION
SYSTEM: MS-DOS, SHARP X68000
YEAR: 1989

1 *MechWarrior*, based upon the tabletop RPG of the same name, which is part of the *BattleTech* franchise, placed the player within the cockpit of a hulking mech, something that was quite interesting and new back in 1986. Despite the title, *MechWarrior* had much more to offer than standard mech-on-mech combat. Based around quite an impressive reputation system, the player could build relationships with the five Great Houses that could lead to opening up more missions to partake in. Spawning a whole slew of sequels and spin-offs, *MechWarrior* games have arguably become even more popular than their tabletop RPG source material.

MEGATRAVELLER 1: THE ZHODANI CONSPIRACY

DEVELOPER: PARAGON SOFTWARE
PUBLISHER: IN-HOUSE
SYSTEM: AMIGA, ATARI ST, MS-DOS
YEAR: 1990

2 Based on the tabletop RPG *Traveller*, this overlooked title gave the player a wonderful sense of freedom, despite receiving mixed reviews upon release. The player takes command of five adventurers as they try and save their civilisation, the Imperium, from the alien race known as the Zhodani. Containing eight solar systems and 28 planets to visit, *MegaTraveller*'s world is vast and interesting. While combat is lacking at times and some elements of its source material are missing, it does not take away from how innovative and daring this was for its time.

SPACE: 1889

DEVELOPER: PARAGON SOFTWARE
PUBLISHER: MICROPROSE SOFTWARE INC
SYSTEM: AMIGA, ATARI, MS-DOS
YEAR: 1990

3 Here's one that has gone under the radar for many. In *Space: 1889* you create five unique characters from scratch and set out on an epic adventure. Set in an alternate 19th Century Victorian Era that has already discovered space travel, the game takes the familiar and has a little fun. This merging of history and sci-fi is rather interesting and plays out exceptionally well as you encounter historic characters such as Jules Verne, Jack the Ripper and Rasputin, but with a twist. With the addition of being able to purchase spaceships on top of the familiar RPG formula, *Space: 1889* is an undiscovered gem.

REALMS OF ARKANIA: BLADE OF DESTINY

DEVELOPER: ATTIC ENTERTAINMENT SOFTWARE
PUBLISHER: US GOLD
SYSTEM: AMIGA, MS-DOS
YEAR: 1992

4 Though this year sees a remake of it, the original *Realms Of Arkania: Blade Of Destiny* – which is the first title in the *Northlands Trilogy* – should not be overlooked. Based upon the tabletop RPG *The Dark Eye*, the game is steeped heavily in lore and, in turn, does a great job at world building. Taking command of six characters, the player navigates through beautifully constructed 3D environments and battles fierce enemies. Complete with rather in-depth character customisation and a superbly detailed isometric battle view, *Realms Of Arkania: Blade Of Destiny* is a terrific start to a highly enjoyable trilogy.

SHADOWRUN

DEVELOPER: BLUESKY SOFTWARE
PUBLISHER: SEGA
SYSTEM: MEGA DRIVE
YEAR: 1994

5 One year after Beam Software released its superb SNES adaptation of *Shadowrun*, BlueSky Software released its own take on the franchise. While it comes from the very same source material, it is a rather different beast compared to its Super Nintendo counterpart. With a fully customisable player-character right from the start, a cracking narrative, accessible combat and a wonderful portrayal of the 'Matrix' (which is arguably better than that of the SNES game), this is yet another excellent vision of the tabletop role-playing game. It takes a slightly different approach, but some might make a case for it being the superior adaptation of its source material.

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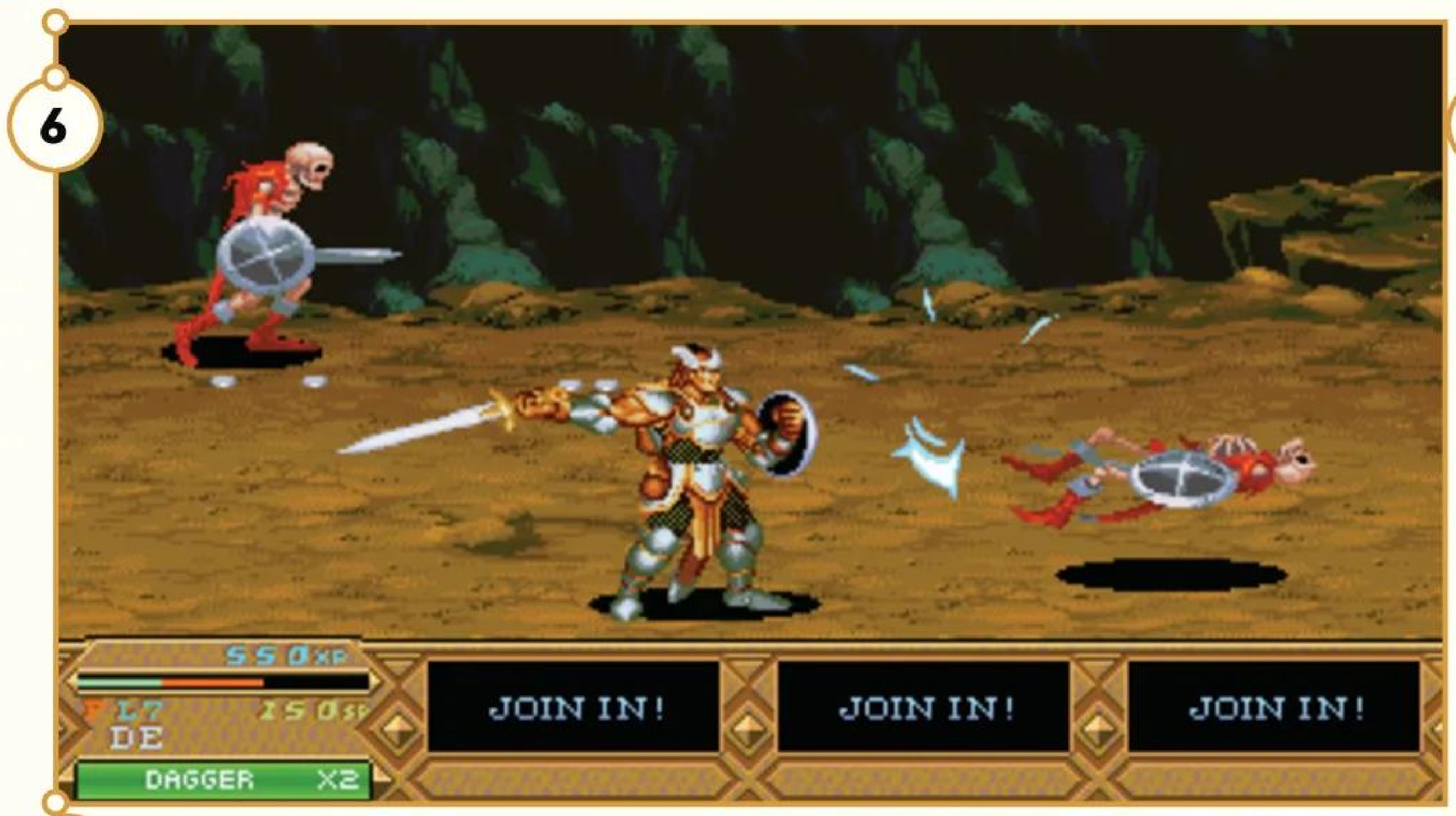

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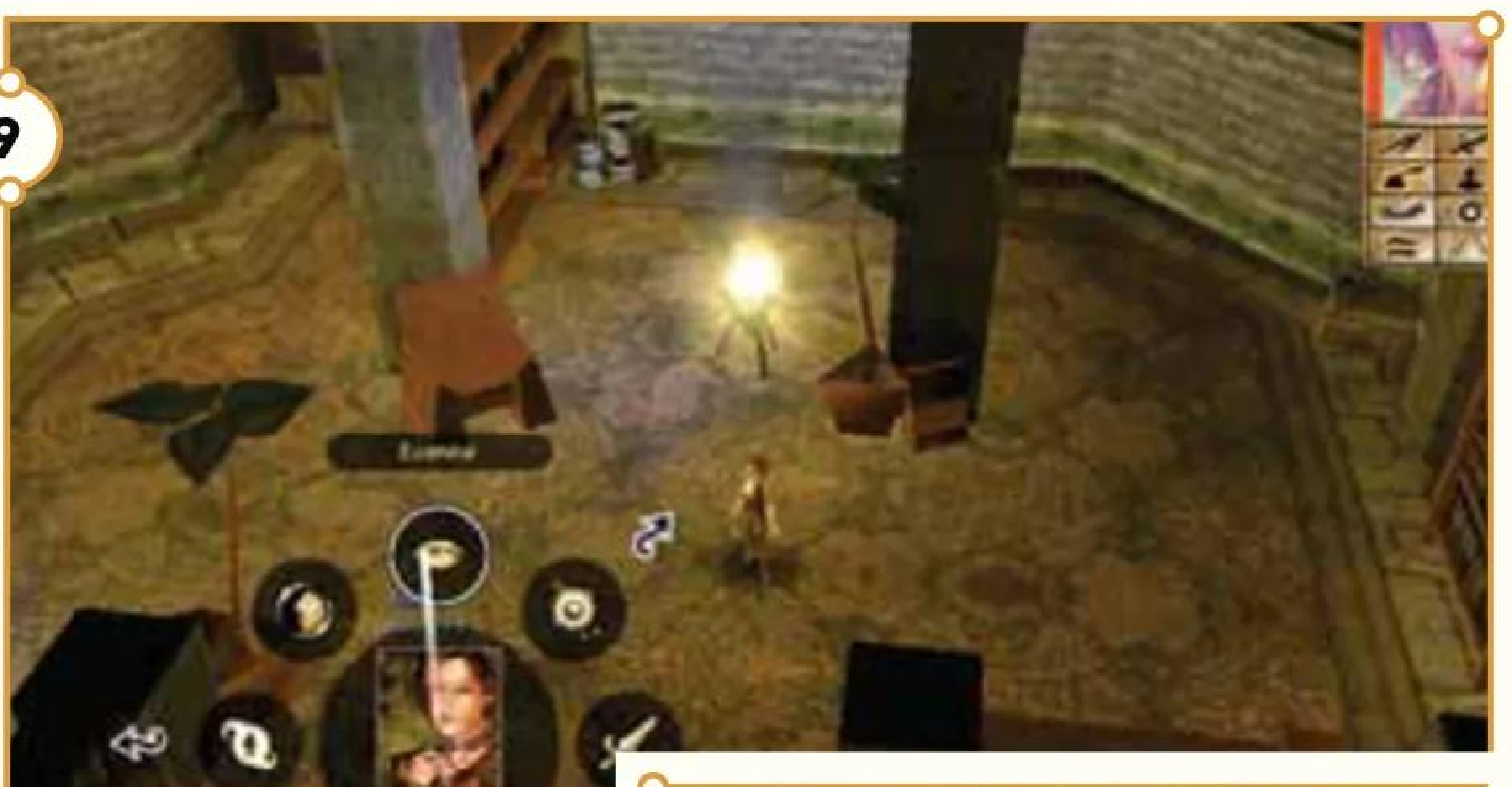

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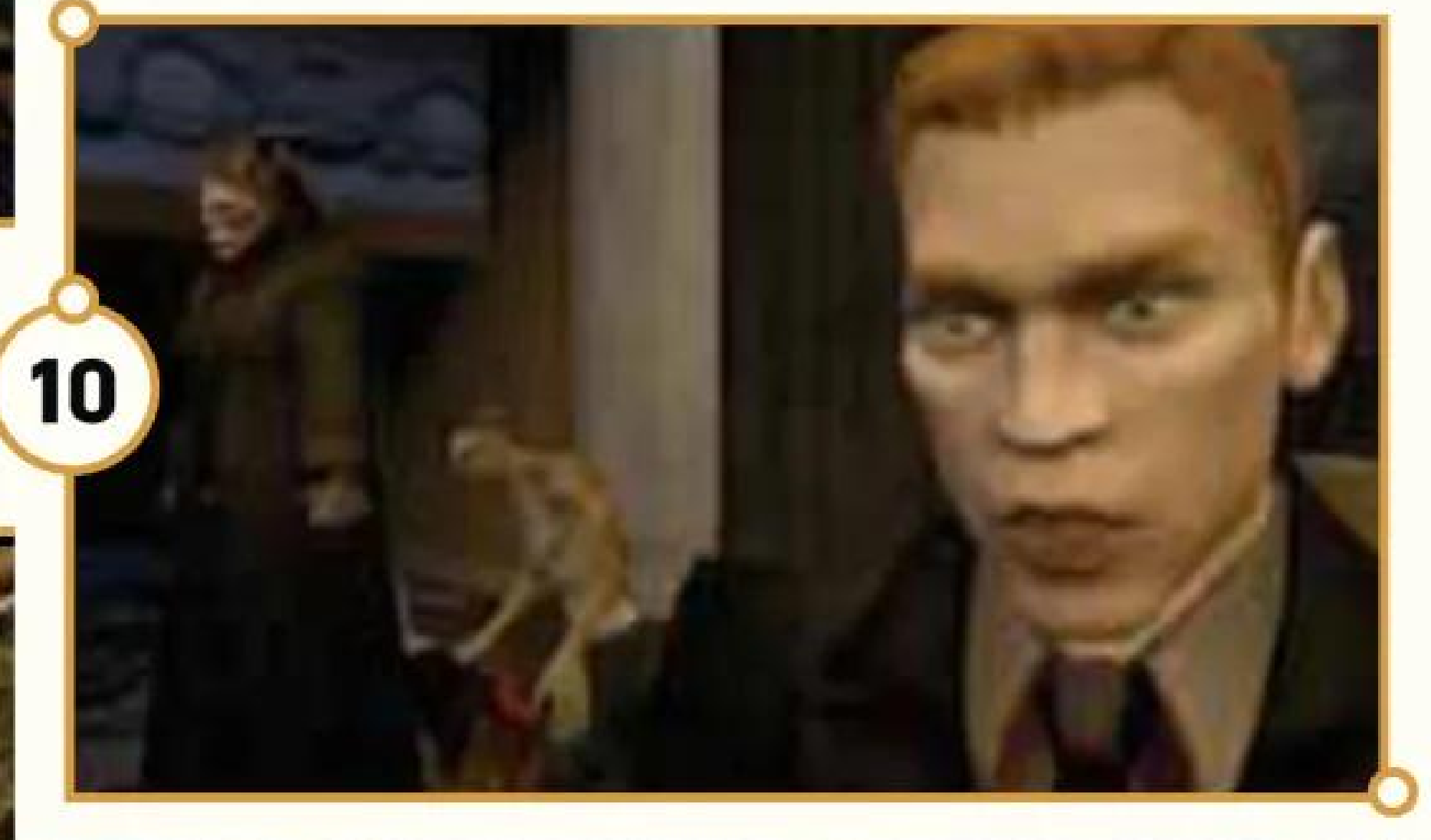

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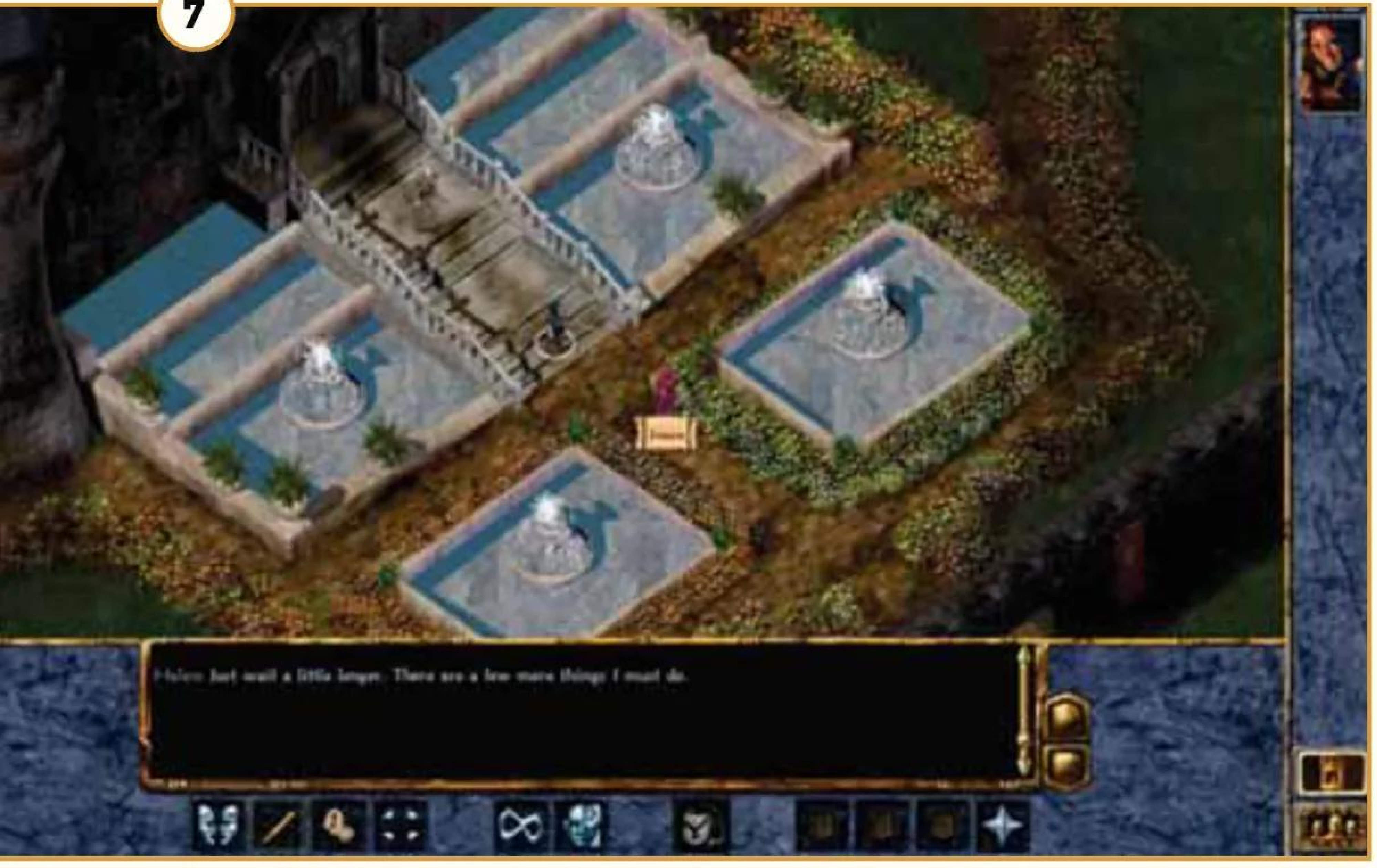

Helen: Just wait a little longer. There are a few more things I must do.

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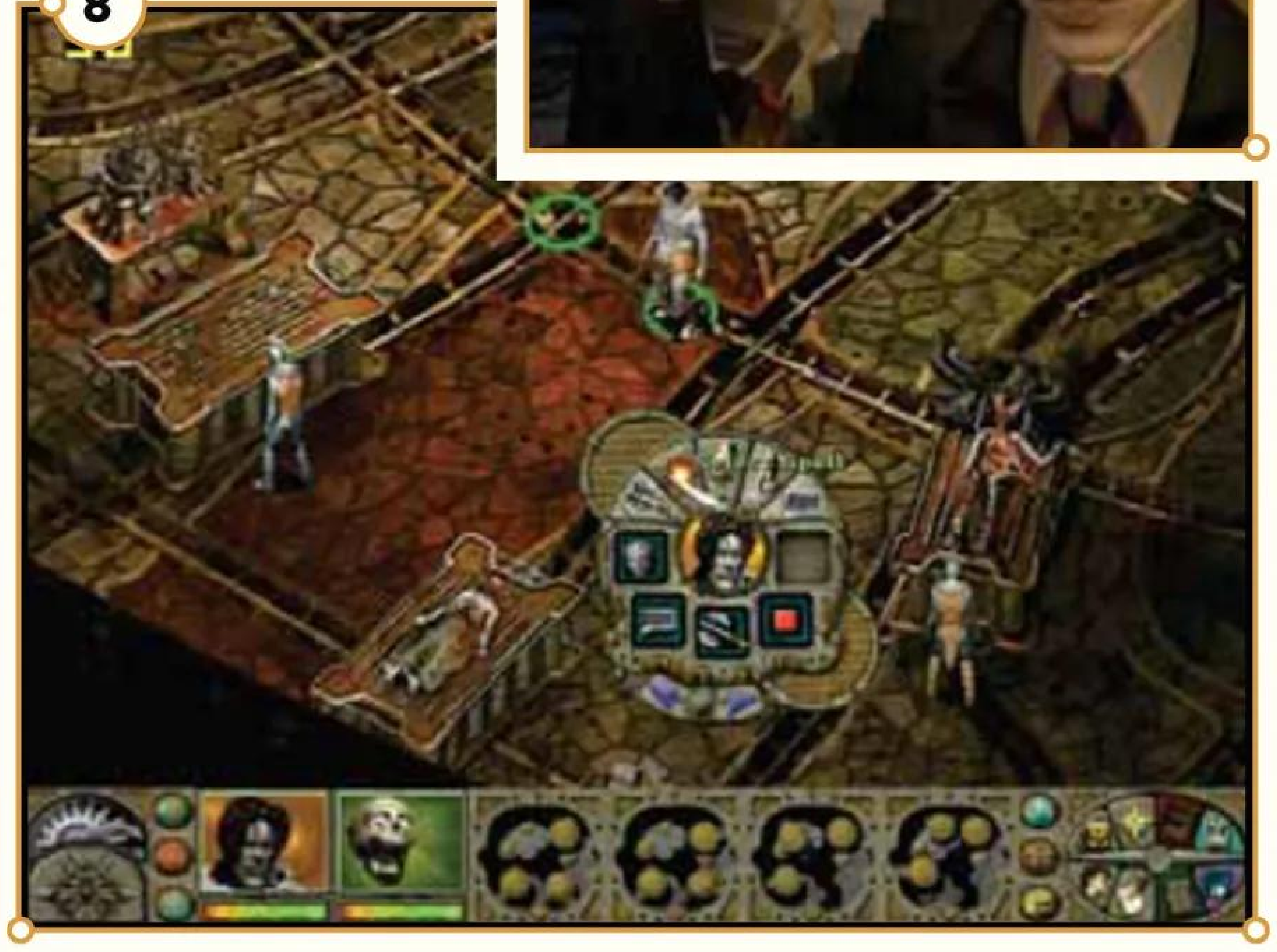


DUNGEONS & DRAGONS: TOWER OF DOOM

DEVELOPER: CAPCOM
PUBLISHER: IN-HOUSE
SYSTEM: ARCADE
YEAR: 1996

6 Leave it to Capcom to take the *Dungeons & Dragons* franchise and turn it into a side-scrolling fighter. But you know what? It works, and it works amazingly well. Despite its odd choice of genre and a focus on fast, intense action, *Tower Of Doom* retains some of the hallmarks of a classic *Dungeons & Dragons* experience. Playable with up to four characters which include the Fighter, Dwarf, Cleric and Elf, and containing a massive array of attacks, actions and spells, *Tower Of Doom* is a surprisingly fresh and enjoyable approach to the series. It spawned its own sequel, *Shadow Over Mystara*. It's now available on Xbox 360, PS3 and PC.

BALDUR'S GATE

DEVELOPER: BIOWARE
PUBLISHER: BLACK ISLE STUDIOS, INTERPLAY ENTERTAINMENT
SYSTEM: PC, MAC OS
YEAR: 1998

7 *Baldur's Gate* is often listed as one of the greatest true RPG experiences to date. Taking place within the Forgotten Realms, one of the many *D&D* universes, *Baldur's Gate* is an in-depth and story-driven game for players who seek true adventure. Boasting an excellent dialogue system and diverse party-based combat, *Baldur's Gate* is actually based on *Advanced Dungeons & Dragons 2nd Edition* rules. It's an utter treat for players and non-players of *Dungeons & Dragons* alike and spawned a direct sequel, a number of expansions and a spin-off. For many, it is the starting point for those wishing to enter the world of *D&D*.

PLANESCAPE: TORMENT

DEVELOPER: BLACK ISLE STUDIOS
PUBLISHER: INTERPLAY ENTERTAINMENT
SYSTEM: PC
YEAR: 1999

8 For many gamers, *Torment* is the best Western RPG of all time, and it's easy to understand why once you become involved in its rich story. Helmed by Chris Avellone, the game placed the player in the role of The Nameless One, an immortal that has lived countless lives yet forgotten them all. Through exploring the city of Sigil, The Nameless One must reclaim memories of his past lives. With a focus on narrative instead of combat, *Planescape: Torment* is a tonic for the gamer weary of cheap thrills. Thought provoking and wonderfully realised, it's a must play, constantly maturing with each subsequent playthrough.

NEVERWINTER NIGHTS

DEVELOPER: BIOWARE
PUBLISHER: INFOGRAMES
SYSTEM: WINDOWS, LINUX, MAC OS X
YEAR: 2002

9 *Neverwinter Nights* was named after the original game of the same name by Stormfront Studios in 1991, which was the first graphical massively multiplayer online role-playing game ever. Whereas Bioware based *Baldur's Gate* on *Advanced Dungeons & Dragons 2nd Edition* rules, *Neverwinter Nights* used *3rd Edition* rules. It also boasted slick graphics that brought the world of the Forgotten Realms to life like never before and intuitive combat that kept gameplay fun and smart. *Neverwinter Nights* is one of the best trips through the world of *Dungeons & Dragons*, with a range of excellent creation tools for making your own role-playing adventures.

VAMPIRE: THE MASQUERADE – BLOODLINES

DEVELOPER: TROIKA GAMES
PUBLISHER: ACTIVISION
SYSTEM: WINDOWS
YEAR: 2004

10 Set within the universe of *World Of Darkness* by White Wolf Publishing, *Vampire: The Masquerade – Bloodlines* begins with the death of the main character, only to be resurrected as a vampire. The player begins by choosing between multiple vampire clans, each with their own powers, personality and ability to steer the story in different ways. From there the player views Los Angeles from the eyes of vampire, completing missions across the city while along the way keeping up the Masquerade – a vampire law that prevents the human world from knowing about their very existence. A truly wonderful and atmospheric title.

ALT
00184 FT

RETROREVIVAL

Pilotwings

UP, UP AND AWAY WITH NINTENDO'S QUIRKY FLIGHT SIM

» SNES » 1990 » NINTENDO

For many, the biggest draw of Nintendo's *Pilotwings* was its excellent use of Mode 7. Look past its stunning visuals however and you'll discover one of the most captivating games to appear on Nintendo's 16-bit console.

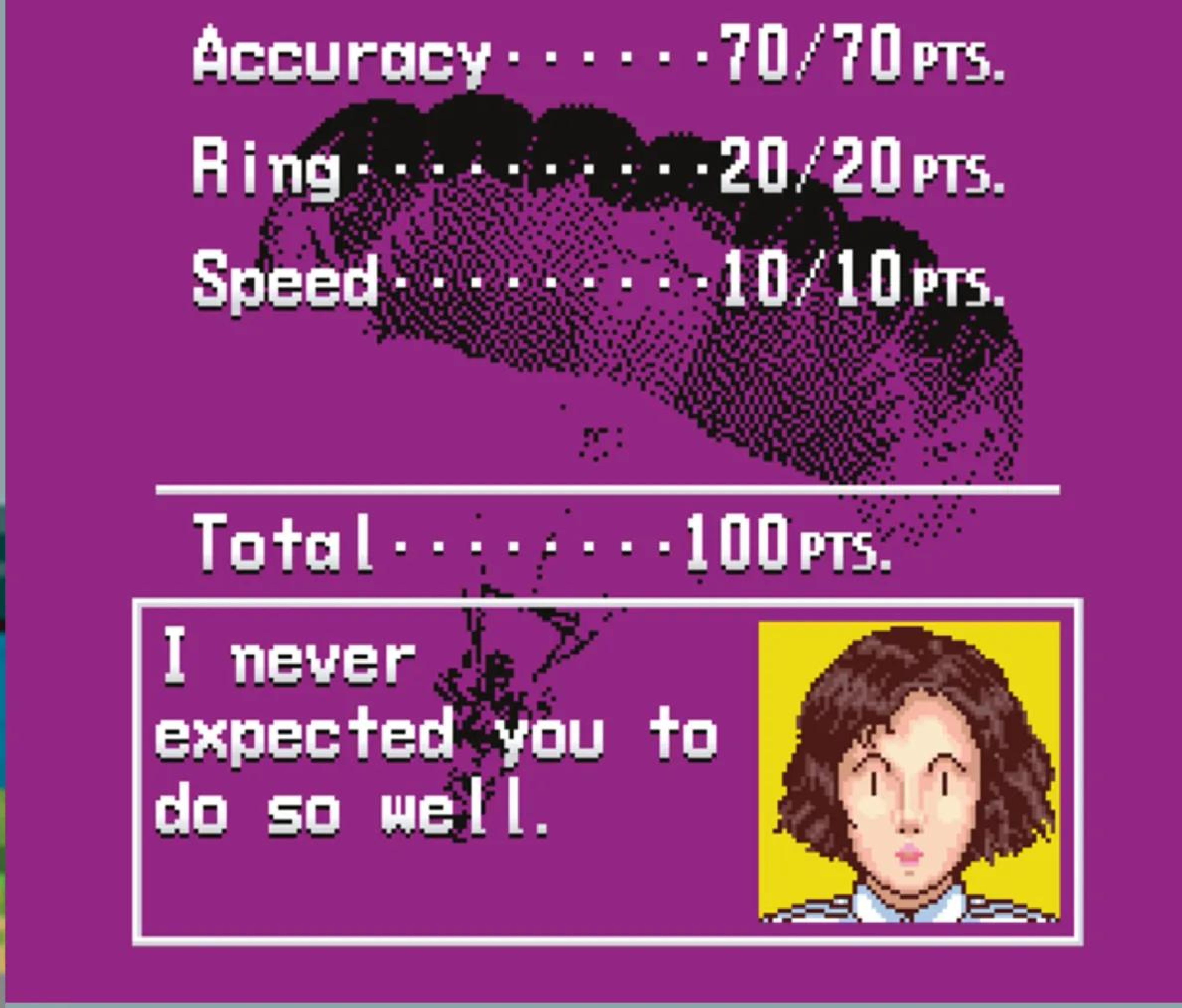
Pilotwings was a flight simulator at heart, but it was a flight simulator that was more interested in ensuring player enjoyment, rather than rigorously focusing on the power of flight. Elements like altitude and speed would certainly factor in to stages, but it retained an arcade-like feel that made it far more accessible than any simulators found on the PC at the time.

Pilotwings training required the player to master four distinct methods of flight: Light Plane, Skydiving, Rocket Belt and Hang Gliding. Initially you're tasked with nothing more than landing your plane and getting your skydiver safely to ground, but as the challenges progress you'll be expected to do ever more complex tricks and tasks in order to fully appease your numerous flight instructors.

Points were awarded for passing through rings, safe landings, and finishing a run on time, but it was also possible to earn additional bonuses by hitting specific markers. Land safely and you'd hopefully pool together enough points to reach the next flight school, but if you didn't, perhaps smacking into the ground while skydiving (leaving a hilarious man-shaped hole) or becoming a smouldering heap on the runaway, your task would become that little bit harder.

You'd stick with it though, because *Pilotwings*' controls felt so tight, so precise that the SNES pad felt like a plastic extension of your hands. Your intrepid pilot failed because you had failed them, and you'd be the first person to make it right by returning for one more run.

Nintendo's 3D reimagining, *Pilotwings Resort*, certainly tried but fell well short of the original's sheer majesty. Flying around on your hang glider as the playfield lazily scales and rotates beneath you remains one of gaming's most relaxing moments and in some ways it has never been bettered. 29 years after its original release, Nintendo's leftfield flight sim remains one of the console's most remarkable games, and a title that every SNES owner should play. *


Accuracy······70/70 PTS.

Ring··········20/20 PTS.

Speed·········10/10 PTS.

Total·········100 PTS.

I never expected you to do so well.

ALT
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00
TIME
01:23
FUEL
GREAT LANDING

ALT
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48
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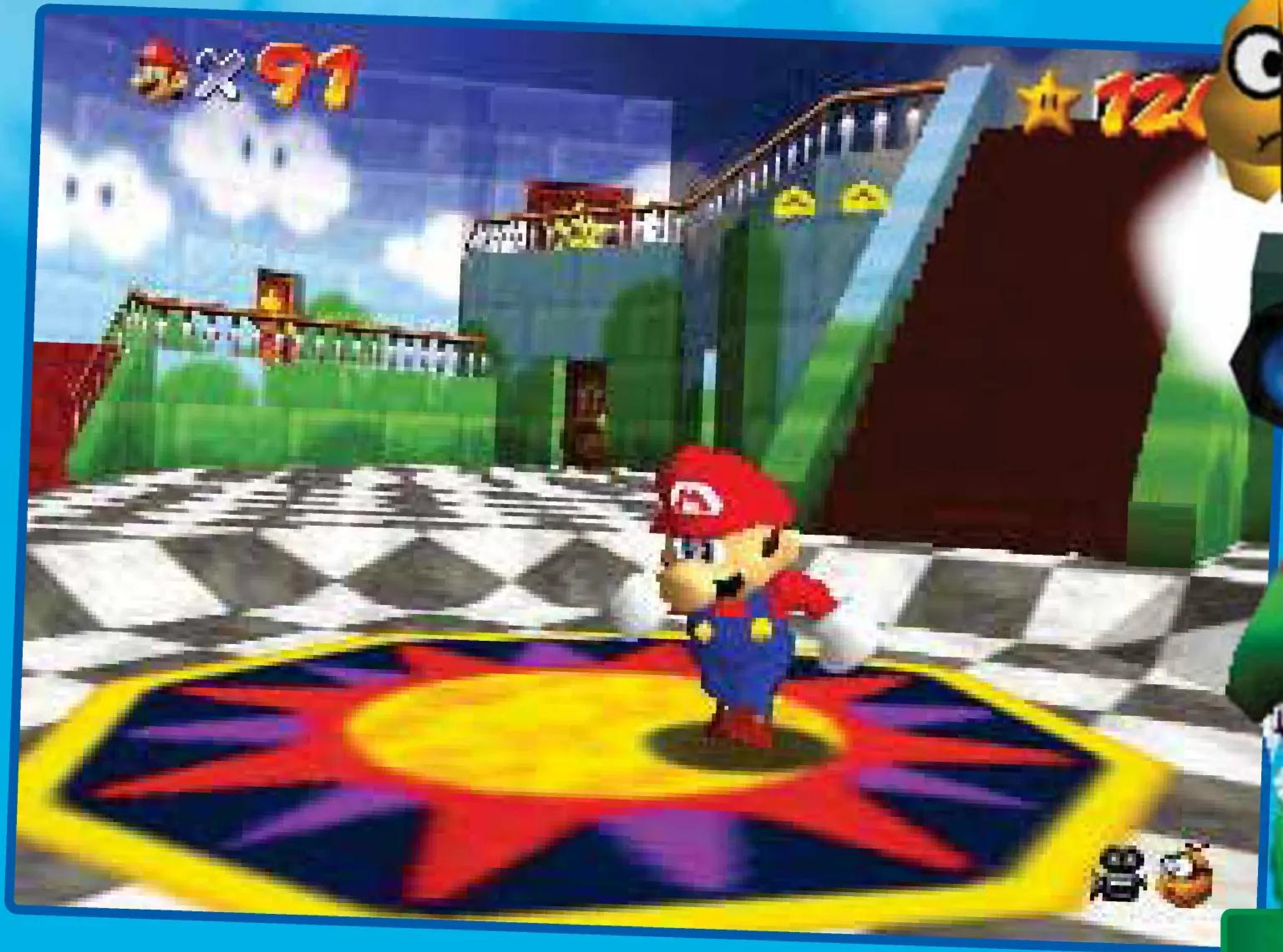
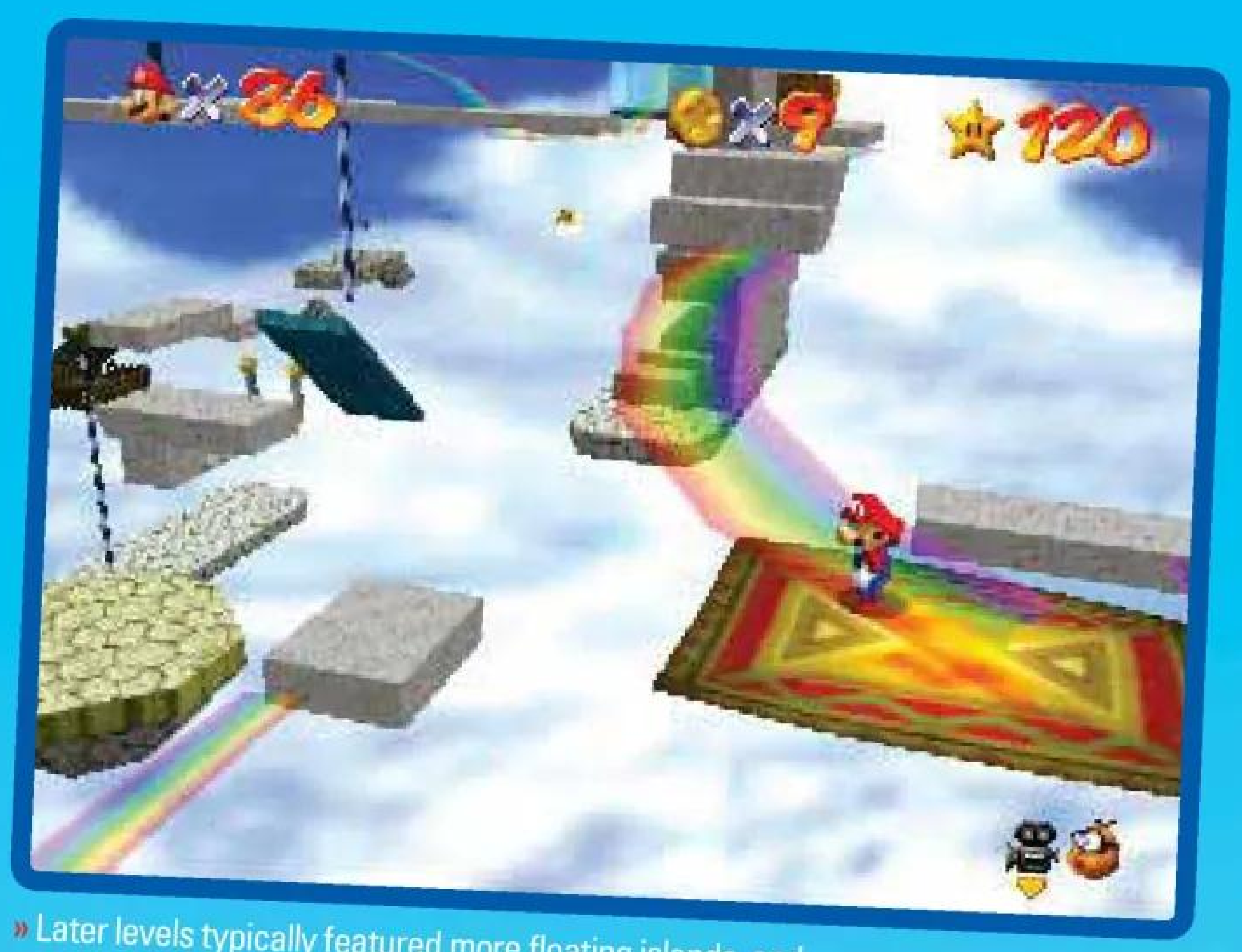
NINTENDO'S 3D GAME-CHANGER

In an age when it was said that 3D platform games didn't work, Nintendo proved us all wrong. Nick Thorpe and Luke Albigés examine the impact of the N64's most revolutionary game…



Nintendo has always been a company that has set its own agenda, and that has rarely been more apparent than it was with the N64. Rather than following the likes of 3DO, Sega and Sony into the CD-ROM market, it stuck doggedly to cartridges. Instead of simply evolving the SNES pad, it produced a radical three-pronged controller design. Neither of those design choices proved to be the future – it's a tall order to convince an entire industry to do things differently, after all. The thing that made people take note was *Super Mario 64*, though – a bold and unique design, just like the machine it ran on. However, unlike its host hardware, it made a profound impact on the rest of the industry, shaping the development of future platform games and 3D games in general for years to come.

Of course, *Super Mario 64* had to be a bold design. The one common feature of 3D platform games released before *Super Mario 64* is that they were all distinct creations, as no two developers had the same vision of how to adapt the genre to the polygonal revolution. Exact gave us *Jumping Flash!*, a game which offered free-roaming stages, viewed from a first-person perspective. Realtime Associates delivered *Bug!*, which featured 3D stages comprised of interlocking straight paths, thus strictly regulating player movement. Xing's *Floating Runner* utilised free-roaming stages but employed a fixed perspective that made it feel almost like a top-down 2D game. Even if Nintendo had wanted to follow convention with Mario's 3D debut, there was simply no convention to follow.



» Later levels typically featured more floating islands, and consequently greater risk of death by plummeting.

The other reason that it had to be a groundbreaking game was the weight of expectation placed upon it at the time. "Up until *Mario 64*, and probably until *Mario Galaxy*, there has always been expectation surrounding a new Nintendo console and with it a new *Mario*," says Paul Davies, who was the editor of *Computer & Video Games* during the development and release of *Super Mario 64*. "So, even though we had no idea how this would shape up, the prospect of *Ultra 64 Mario* was enough to affect your breathing for a while."

Even those close to Nintendo weren't aware of what was in the works. "I was working for Software Creations at the time and they were part of the original 'Dream Team' of developers working on N64," recalls John Pickford. "I was lucky enough to be part of a group to visit the Shoshinkai 1995 show in Tokyo for the first unveiling of the Ultra 64 and its software. When we landed at the airport I remember bumping into several other British developers including the Stampers from Rare and David Jones from DMA design. David said something along the lines of, 'I hear *Mario* is looking very good.' That was the first time I had heard there was a *Mario* game in development. There had been zero publicity or even mention of *Mario* until that point."

» John Pickford was one of the early 'Dream Team' developers for the N64 and had an early glimpse of *Mario 64*.

DOFFING THE CAP

A Hat In Time director Jonas Kaerlev on how Super Mario 64 inspired and influenced his crowdfunded 3D platformer

When did you first encounter *Super Mario 64*, and what impression did you get from it?
I experienced *Super Mario 64* for the first time in the late Nineties. It was the first game I played that was fully 3D, so it was really impressive at the time.

I wasn't great at English back then, since I'm not a native English speaker, so a lot of the dialogue got lost on me, but that didn't stop me from getting all 120 Stars. The presentation made it easy to fill in the gaps and imagine what the characters were saying. If I didn't know what to do because the dialogue was the only guide, I'd just explore the level until I found out what was going on – this sparked my interest in games that provide an interesting world to explore.

What were your favourite parts of *Super Mario 64*?
There are so many good parts! I think everyone remembers the piano in Big Boo's Haunt, the vertical climb up Whomp's Fortress, and plotting vengeance against the bird who took your hat in Shifting Sand Land. Peach's Castle is also one of the best parts of *Super Mario 64* – it feels so mysterious, almost like a full level in and of itself.

Which 3D platform games do you think were the best successors to *Super Mario 64*?
Super Mario Sunshine is definitely one of the best, and it's a *literal* successor to *Super Mario 64*. It stays true to the formula that *Mario 64* created, but adds more flavour to the world, making it all seem like a real, connected place. I like how the levels transform over time. It's so cool to watch Delfino Plaza get flooded with water when Corona Mountain erupts.

Psychonauts by DoubleFine is also a really great spiritual successor! It's a bit more story-based, and the levels are amazing, especially Whispering Rock and The Milkman Conspiracy. *Psychonauts* even did *Super Mario Galaxy* gravity before that was a thing!

Which elements of *Super Mario 64* have you drawn inspiration from for A Hat In Time?
Similar to *Super Mario 64*, every mission in *A Hat In Time* is centred on a Time Piece the player has to collect. A lot of the levels undergo massive changes for every new mission, to make the level feel fresh on every visit.

At first, you might be defeating the Mafia Of Cooks to collect your Time Piece, and next you're a detective in the mission 'Murder On The Owl Express'. Every new mission has a story, and you'll get to understand more about the levels and characters on every visit.

As a developer of 3D platform games, how do you seek to differentiate *A Hat In Time* from genre-defining games like *Super Mario 64*?
A Hat In Time takes a different approach to both gameplay and story. For gameplay, the player's moveset is completely different, using a double-jump and an air boost to navigate both horizontal and vertical space. The player can also change and upgrade the moveset by collecting badges and putting them on their hat. This way, we reward players for exploring with features that enrich their experience. For story, every level in *A Hat in Time* is called a Chapter. Every Chapter focuses on a single location, be it Mafia Town, Subcon Forest, or the Owl Express train. Additionally, every Chapter introduces a new cast of characters, and these characters stick with you for the entire Chapter, until you reach the Chapter finale, where things go off the rails! In Subcon Forest, you'll be signing your soul away in contracts to The Snatcher, and on the Owl Express, you'll have to choose whether the angry Conductor or the smooth DJ Grooves is your friend, or your foe.

A Hat in Time also supports multiplayer, both local and online. We took inspiration from a *Mario 64* hack, and saw a lot of potential to fully realise multiplayer for *A Hat in Time*. You can defeat bosses, collect Time Pieces and have a good time your friends.

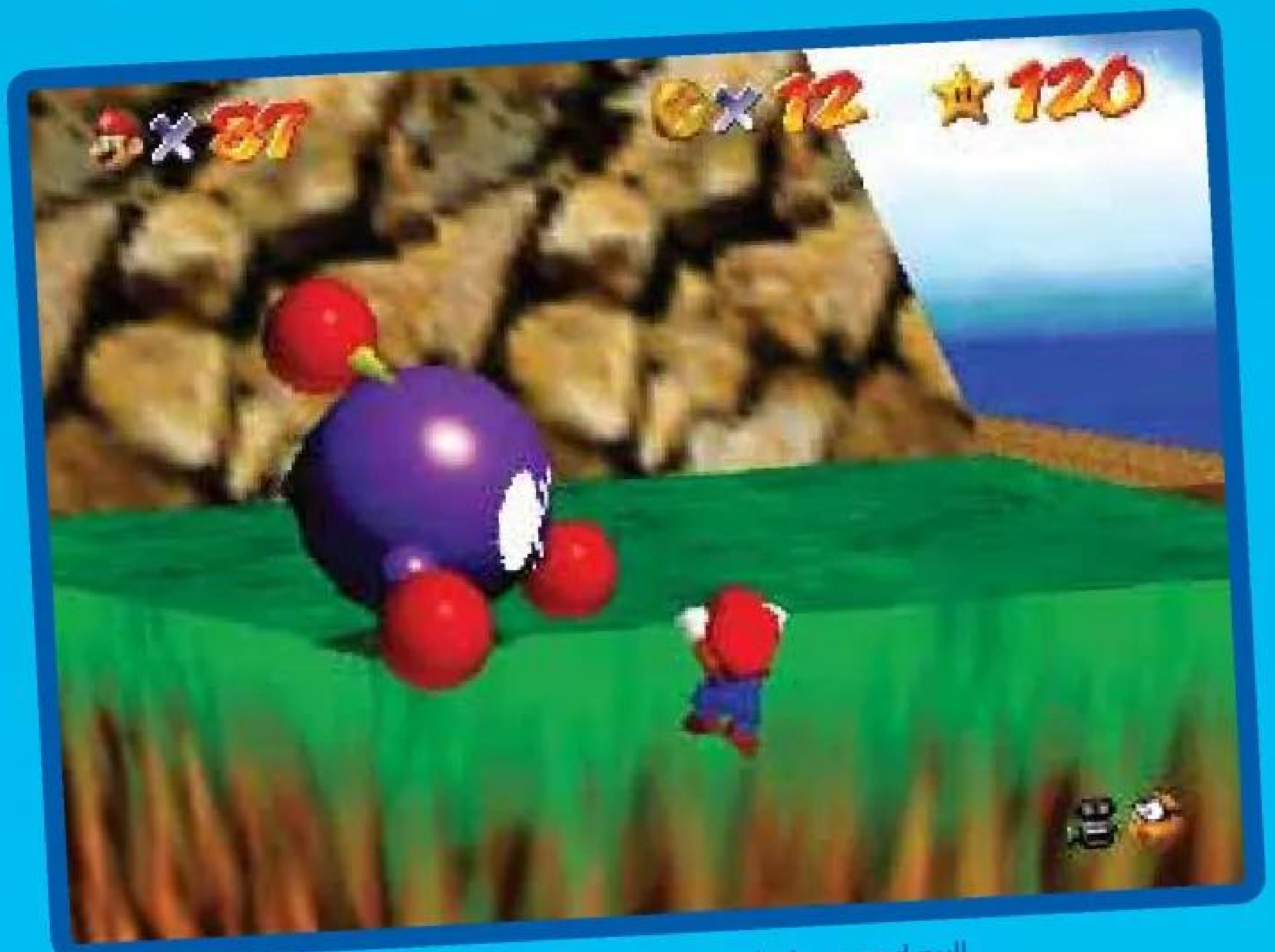
Lastly, *A Hat in Time* has modding support. Players can create their own worlds and missions. We've seen the amazing things people can make in their favourite games, so we want to embrace that fully. The levels can be either simple to design or they can be giant worlds with multiple missions. All these features feel like a natural evolution of *Mario 64*, and we hope everyone will be enjoying *A Hat in Time* when it comes to Windows and Mac in 2017.

▶ Placards at Shoshinkai said that the game was 50 per cent complete, and even described *Super Mario 64* as a temporary title, but that wasn't the impression that attendees took away from the event. On a visual level alone, Nintendo had already produced something stunning. "The game was shown on the show floor – looking finished and playable," says John. "And like nothing else I'd ever seen." Paul was also attending the show, and the game made a similar impression on him. "It sounds incredibly corny, but I couldn't believe my eyes. I was gobsmacked, bowled over."

That first showing elicited strong reactions from all who saw it. "I was so excited, I tried to impress the hotel staff with my bagful of press materials and transparencies," Paul confesses. "They were not impressed." According to John, other people were feeling something closer to fear, or at the least denial. "I don't know if it's true but I heard a rumour that 'Sony execs' were going around telling people that the game was running on hidden 'workstations'," he recalls. "Hard to believe now but a lot of the technical elements (MIP mapping, filtering, perspective-correct textures, z-buffering, hardware anti-aliasing) were all new to consoles and not present on PlayStation."

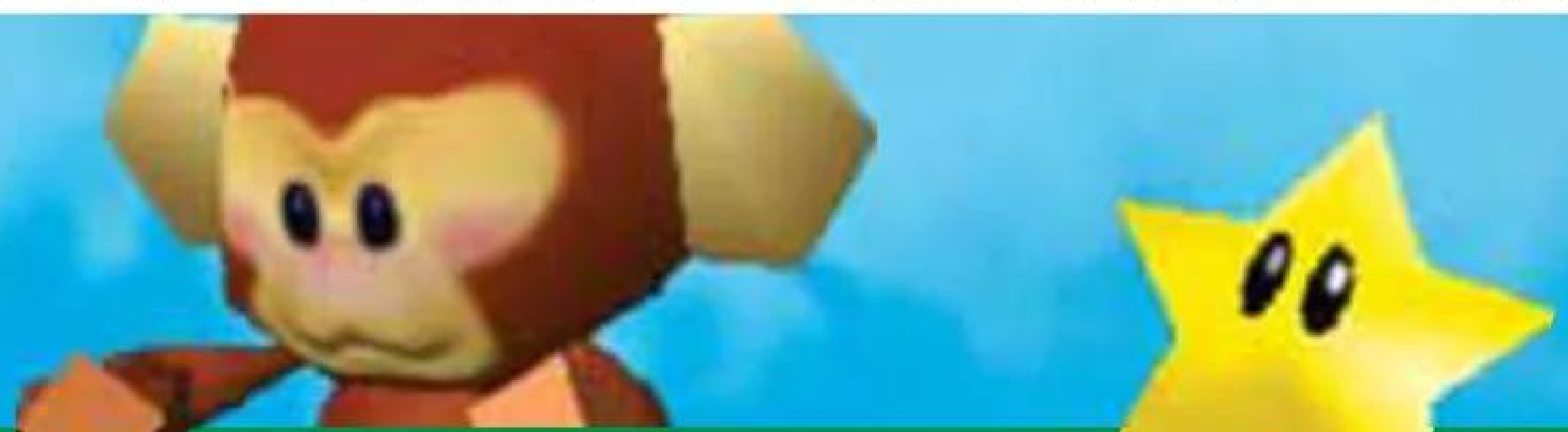
The version of *Super Mario 64* shown at Shoshinkai in November 1995 might not look immediately recognisable to fans – even the familiar entrance hall of the castle is different, lacking the cloud murals and even the central staircase seen in the final game – but that incredible visual polish carried over to the finished game because there was no fabrication or trickery involved. The N64 was perfectly capable of all of those features, and gave *Super Mario 64*'s worlds and characters a feeling of solidity that immediately placed both the game and console ahead of the competition.

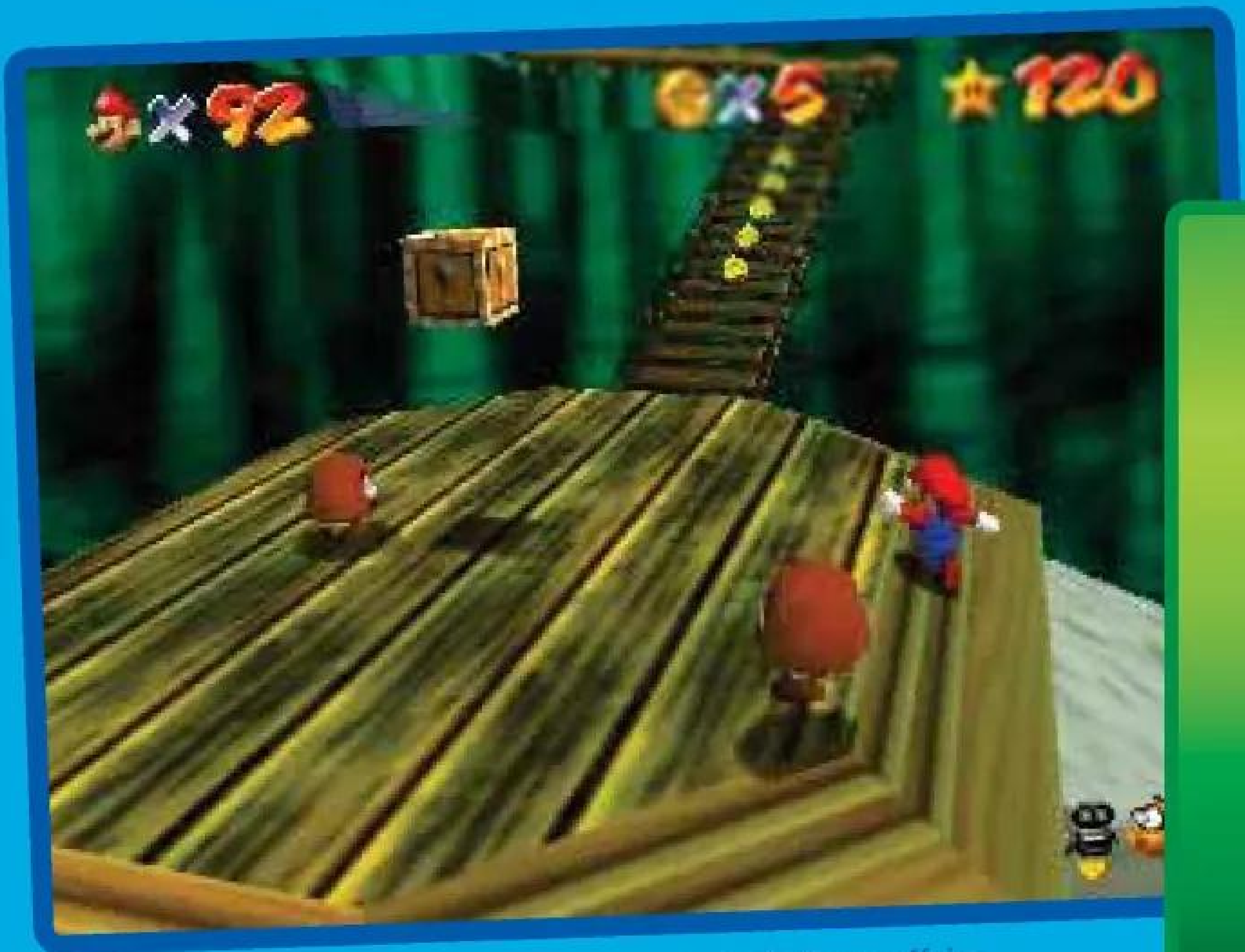
"Everything just worked so incredibly slickly," says Andrew Oliver, then running *Glover* developer



» For the first time ever, Mario could dangle from ledges and pull himself up after a close jump.

» Chris Sutherland was responsible for *Banjo-Kazooie* and is now working on *Yooka-Laylee*.





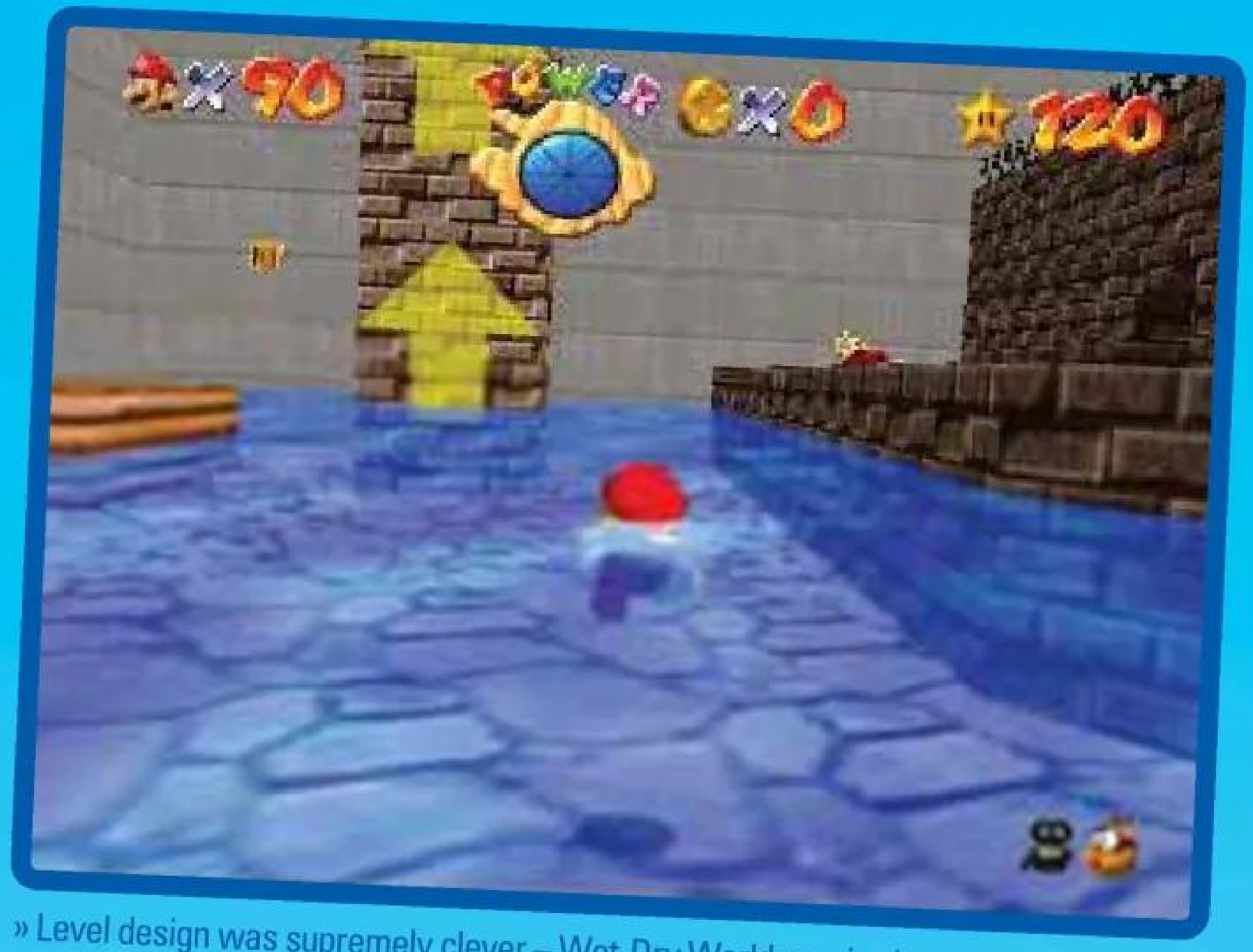
» Unlike the main stages, boss stages were typically linear affairs with little freedom to explore.

> **“This set the benchmark – anyone releasing a 3D platformer thereafter on N64 was going to be compared with Mario by players!”**
>
> Chris Sutherland

Interactive Studios. “In the ‘other camp’, we’d been amazed by PlayStation’s 3D capabilities. But, whilst Sony pushed all developers to make 3D games, many of us struggled with certain aspects. Cameras were shaky, 3D meshes showed cracks, textures warped and getting a third-person character to feel really nice and for the camera to track it well always seemed just out of reach.” Nintendo’s game exhibited none of those problems. “*Mario 64* was so professional, no shake, no shudder, or warping or cracking textures. The PlayStation was 32-bit with integer maths and the N64 was 64-bit with floating point maths, so there was good reason it worked so much better.”

Mark R Jones, a former artist for Ocean, was similarly taken aback by the leap in 3D quality. “The graphics were jaw-dropping. I’d only really played a few 3D games on the PlayStation and this was a massive improvement,” he remembers. “Round things looked round and not like a series of joined up straight lines. The colours were bright and vibrant and, despite many games claiming that playing them was ‘like controlling a cartoon’, I think that with this game it had really and finally happened for real. I remember everyone at school saying that *Knight Lore* on the Spectrum was like a cartoon back in 1984. But really it wasn’t. *Mario* was the real thing. It had actually happened.”

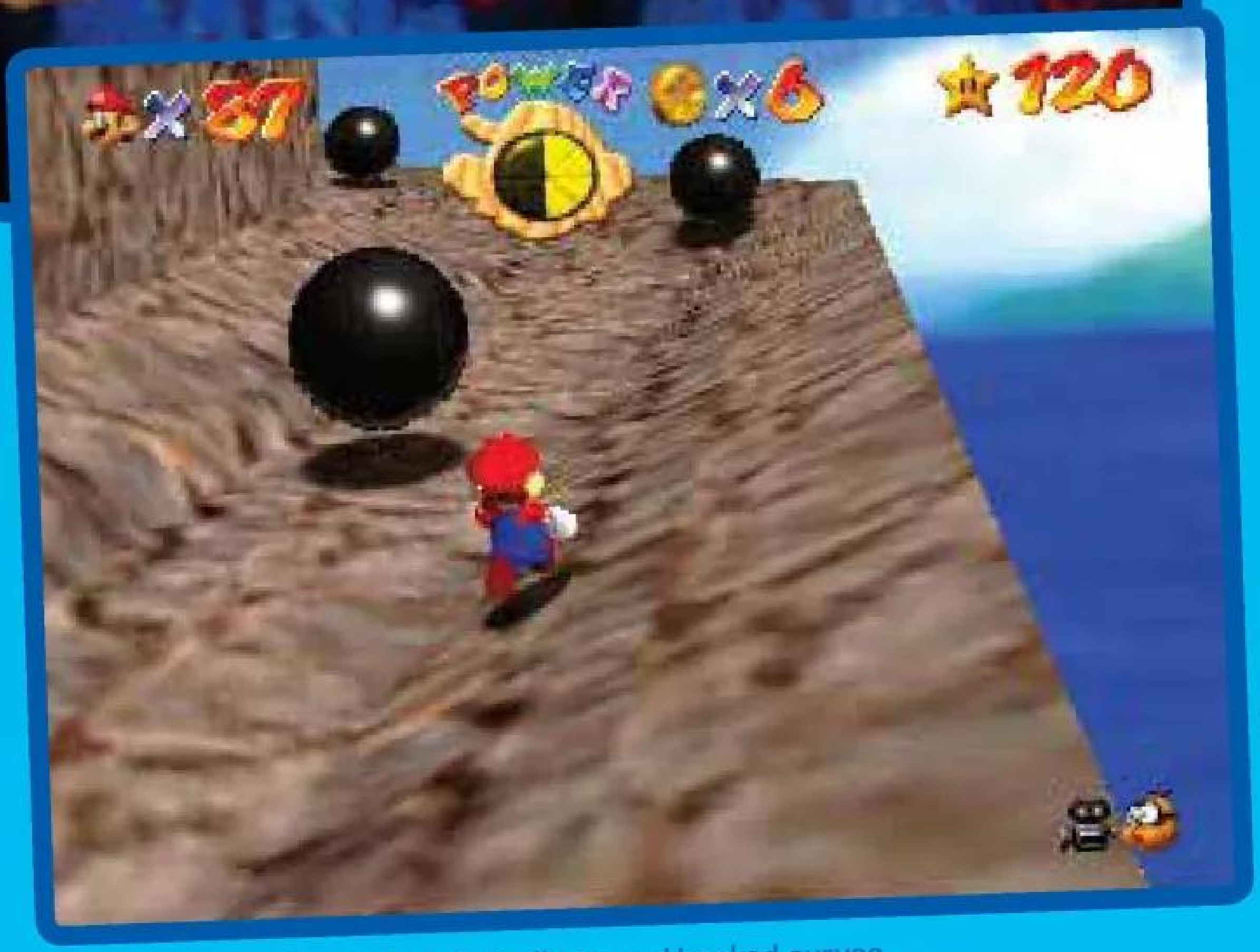
The press immediately set the hype train in motion. New images would appear in magazines every month, whipping anticipation up to fever pitch – but it wasn’t just the public that was excited. Even developers couldn’t wait to get their hands on the game. “Being a fan of the 2D *Mario* series I was fascinated by how they’d brought *Mario* into 3D, what problems they’d encountered and the approaches they took to tackling them,” says Chris Sutherland of Playtonic Games. At Rare, then a Nintendo subsidiary, he served as the lead programmer on *Banjo-Kazooie*. “One might have expected the transition to 3D to have been gradual, e.g. Nintendo could have taken a traditional 2D *Mario* course and given it hints of 3D (similar to the *Donkey Kong Country Returns*) but instead they jumped in head first to give the player an immersive world to explore,” he continues. “This set the benchmark – anyone releasing a 3D platformer thereafter on N64 was going to be compared with *Mario* by players!”



» Level design was supremely clever – Wet-Dry World required manipulation of water levels to achieve your goals.

Word got around the *Killer Instinct* barn that the new *Mario* game was in the building so we all piled into Chris Tilston’s room for a gander,” recalls Chris Seavor, who led the development of *Conker’s Bad Fur Day.* “I think this was a little bit before it actually released and it was the Japanese version, so nobody could understand any of the text. Needless to say it was pretty mind-blowing. I’d never seen anything like it before. Then Tim [Stamper] turned up looking rather mortified that we were all seeing this ‘super secret’ thing and took it away… Still, I’ll never forget that moment.”

Andrew’s first experience with the game was equally memorable. “It was the summer of 1996 at the relatively-new E3 show in Los Angeles – Nintendo had a huge stand with around 30 N64s set up and dedicated to *Mario 64* and people queuing three deep to take turns. Most were running around outside the castle – just enjoying the experience of running Mario around a beautiful cartoon fantasy world. They nailed the feel good controls of a character running around a 3D world. Everyone was beaming – it was a turning point for the industry.”



» These rolling balls rolled realistically around banked curves, producing lateral movement that could trip unwary players up.

The importance of solid controls to *Super Mario 64* can’t be overstated. “It was the first time I had played a game where messing around with the character’s abilities was a lot of fun even with nothing specific ▶

DIFFERENT STROKES

Mario's 3D debut was so good it launched the DS, too. But the DS version was no lazy port – it was a remake with new features…

MORE CHARACTERS

■ In addition to Mario, three extra characters – Yoshi, Wario and Luigi – were made playable, each with slight differences. Luigi's jumps are higher at the cost of handling, for instance, while Yoshi gets a unique hybrid of his *Yoshi's Island* move set and the original *Super Mario 64* one. Collecting caps mid-level lets you switch between them.

NEW ABILITIES

■ Classic *Mario 64* power-ups like the Wing Cap, Vanish Cap and Metal Cap are split among each of the characters, while new powers include mushrooms that can boost character size and damage (like the Mega Mushrooms seen later in the series) and a fire breath move for Yoshi. Several Power Stars are tied to the character-specific abilities.

EXTRA STARS

■ There are 37 additional Power Stars in the DS version, although several original ones were altered or removed for a grand total of 150. Many of the new ones are Switch Stars (which triggered by a switch and must be collected before they vanish). Collecting every Star still allows access to the castle roof via the cannon in the grounds, although Yoshi is no longer there as he's now playable.

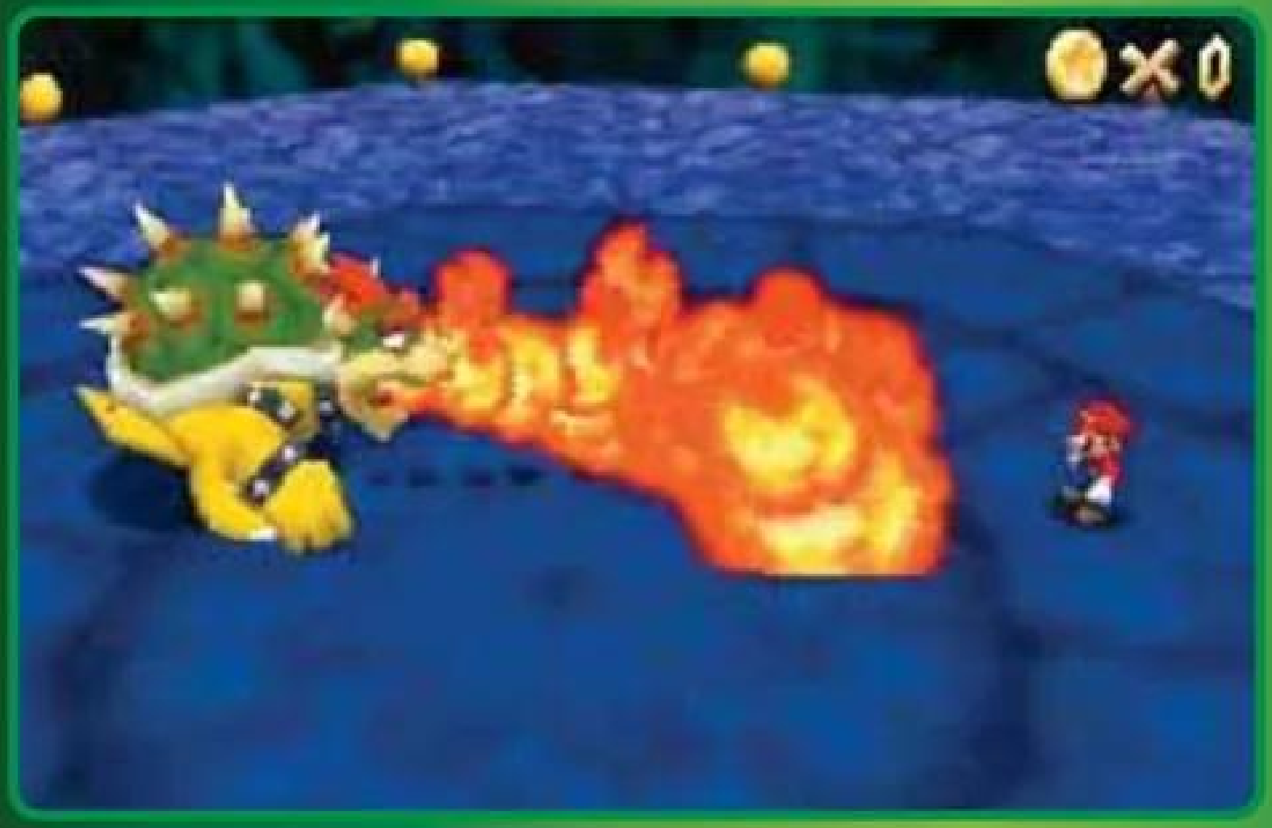
» Rare's Gregg Mayles was the designer for both *Banjo-Kazooie* and *Banjo-Tooie*.

MULTIPLAYER & MINIGAMES

■ VS Mode lets up to four players face off in arenas in an attempt to grab as many Stars and Coins as possible within a time limit. There are also unlockable minigames, which can be earned by catching rabbits in the main game. These are largely simple distractions, all of which are designed to showcase various uses for the handheld's touchscreen.

CONTROL OPTIONS

■ Given that the DS didn't have an analogue stick, Nintendo had to get creative with its input methods here. One option is to use digital control with an extra run button, although this lacks precision. The other uses the touchscreen as a virtual analogue stick and, while tricky to get used to, this is the best of the two options once you manage to adjust to it.



IMPROVED GRAPHICS

■ A combination of decent processing power and a smaller screen means that many aspects of the graphics see a marked improvement on DS – Bowser's model in particular is more in line with his modern look, while there are plenty of notable changes (most for the better) over the course of the game. The second screen is also used to display an overhead course map.

×03
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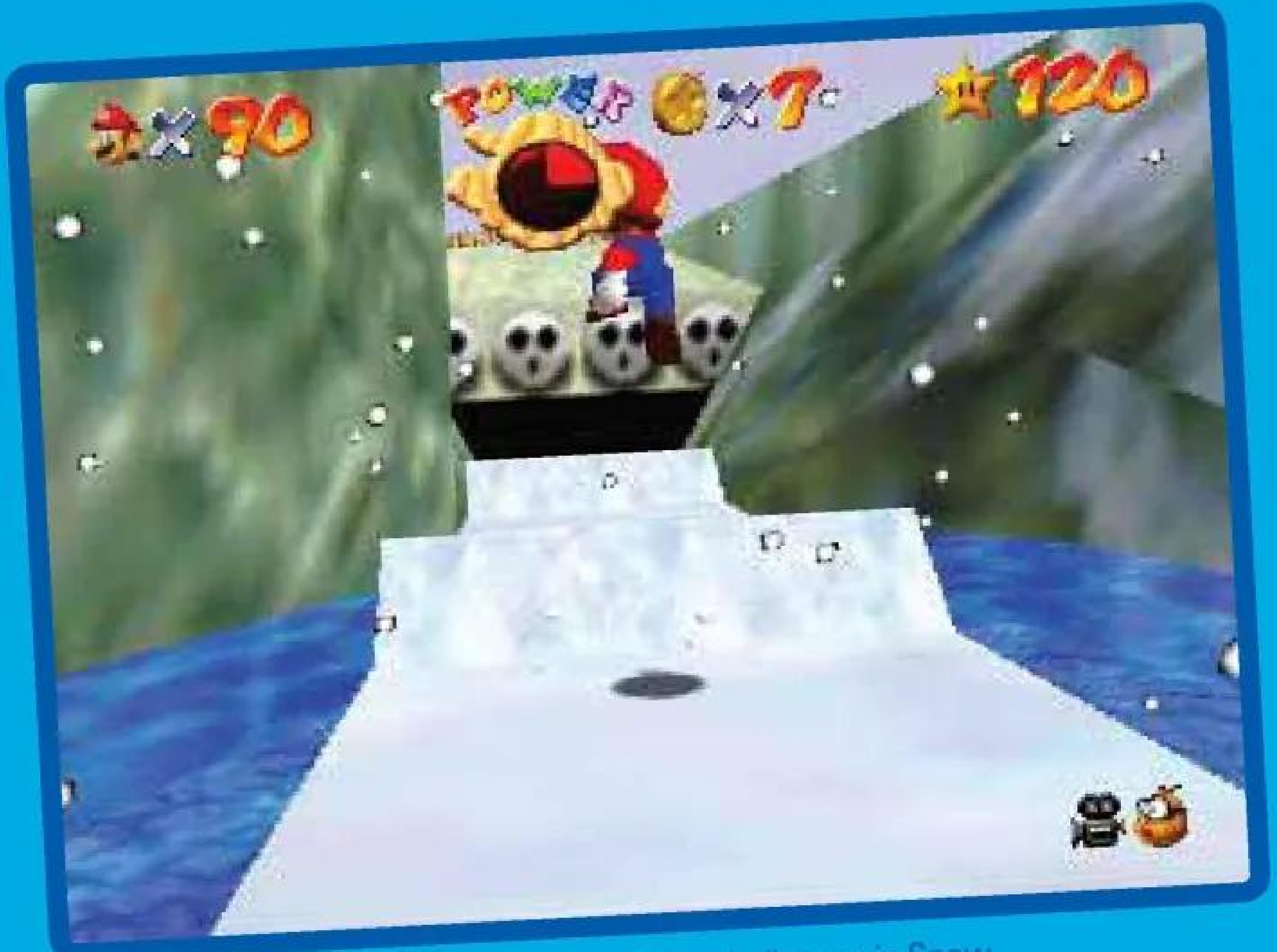


» Jumping over waves of ice is just one of the challenges in Snow Man's Land.

▶ to do," says Gregg Mayles, a Rare developer and *Banjo-Kazooie*'s designer. "It has still not been beaten, in my honest opinion," Chris Seavor adds. "Slick, tight, great animation and totally intuitive. The first attempt at such a control type and they nailed it for the ages." In fact, he found that even the difficult aspects of controlling the portly plumber provided satisfaction. "There was a particular mechanic that took me ages to get to grips with, which involved jumping off a wall, I just couldn't do it. Then one day all my muscles suddenly twigged, and the sheer joy of jumping up and up from wall to wall, in 3D, was a revelation."

Paul's first impression of the game centred on "using the central, solitary analogue stick to help Mario perform backflips and dodge around the first level of the game", and it was the analogue stick that did a lot of the work. John explains the appeal well: "The self-centring thumb stick was the first viable analogue joystick I'd come across. Analogue sticks have been around forever but they were always near-enough impossible to use. *Mario* had effortless, expressive, intuitive control of a character in a 3D world," he says. "Back then, it was more or less accepted that 3D platformers don't work. There had been a few noble attempts but they were all difficult and confusing to play. Usually the gameplay was about overcoming the controls and camera restriction," he continues. "*Mario 64* had you running, skipping, backflipping, climbing trees and even flying. Nintendo had done the impossible."

Of course, all of that excellent control would have been for nought if the game didn't provide adequate space to utilise it, and challenges to overcome. Nintendo delivered in both regards. Paul remembers the sense of disbelief in the office at the time. "The art designer of *C&VG* was asking me all these questions, because he doubted that much of what he had heard was true: 'Can I just run onto that bridge and jump into the water? And then I can swim? Under the water?'" For Gregg, the structure was as important as the space. "3D games up to this point felt restricted in where you could go and what you could do, but *Mario 64* removed these restrictions," he explains. "The freedom made the worlds a joy to explore, coupled with an progression system which allowed you to tackle challenges in the order you wanted to." ▶

MARIO'S MARVELLOUS MOVES

A closer look at the portly plumber's amazingly agile abilities

MOVEMENT ◎ (Analogue Stick)

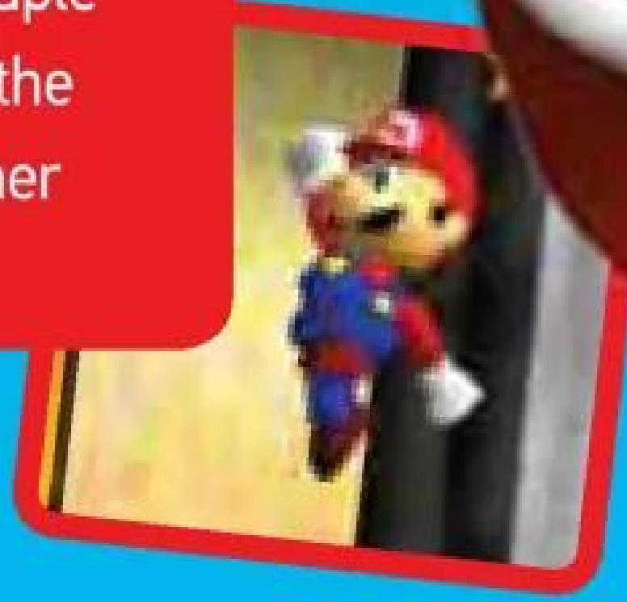
■ Full control over Mario's movement speed is an integral aspect of the game, allowing for a degree of freedom and precision that digital control simply can't offer in 3D space.

PUNCH B

■ A new addition to Mario's arsenal, this allows for more ways of interacting with the world, whether that be hitting blocks and switches or smacking enemies instead of jumping on them.

JUMP A

■ Perfect for when you don't want to be on the ground any more, Mario's staple move is as versatile as ever here – the longer you hold the button, the higher Mario will jump.



CROUCH Z

■ Where once you would just press down on the D-pad to make Mario crouch, here a bespoke button is needed. Rarely required on its own, but frequently incorporated into advanced techniques.

DOUBLE JUMP A, A

■ Time a second jump for immediately after you land from the first and you'll launch Mario slightly higher, with an audio cue to let you know you've performed this successfully.

KICK B (While jumping)

■ There's more to this move than it seems – it maintains Mario's momentum from whatever he's doing, making it a key ingredient of any speedrun rather than an offensive move.

TRIPLE JUMP A, A, A

■ A third timed leap is also possible, this time giving a much more obvious and useful height boost. With the Wing Cap on, this move will send Mario soaring off into the sky.

DIVE B (While moving)

■ Casual players might not like this move on account of how often it comes out instead of the punch while moving, but experts swear by it for grabbing objects without losing too much momentum.

BACKFLIP Z + A

■ Similar to the direction-changing somersault, only performed from a static crouch. Given Mario's general mobility, the somersault is generally considered to be more useful.

SWEEP KICK Z + B

■ Useful for making Mario perform extremely brief breakdancing displays, but not a lot more, sadly. Still, variety is never a bad thing, so bust a move from time to time!

LONG JUMP Z + A (While running)

■ Timing is key to mastering this long-range leap – press and hold Z while running to crouch-slide and quickly press A to send Mario flying. Bold use of this can skip many obstacles and hazards.

CLING (Land near platform edge or slowly walk off ledge)

■ Mario no longer has to fear death from slightly misjudging distance. Fall just short of a ledge and you'll grab the edge and can pull yourself up, sacrificing speed for safety.

SOMERSAULT (Analogue stick away from direction of running) + A

■ Jerk the stick away from the direction of travel and jump to perform a flip that goes much higher than a regular jump – great for quickly getting a vertical boost.

SLIDE KICK Z + B (While running)

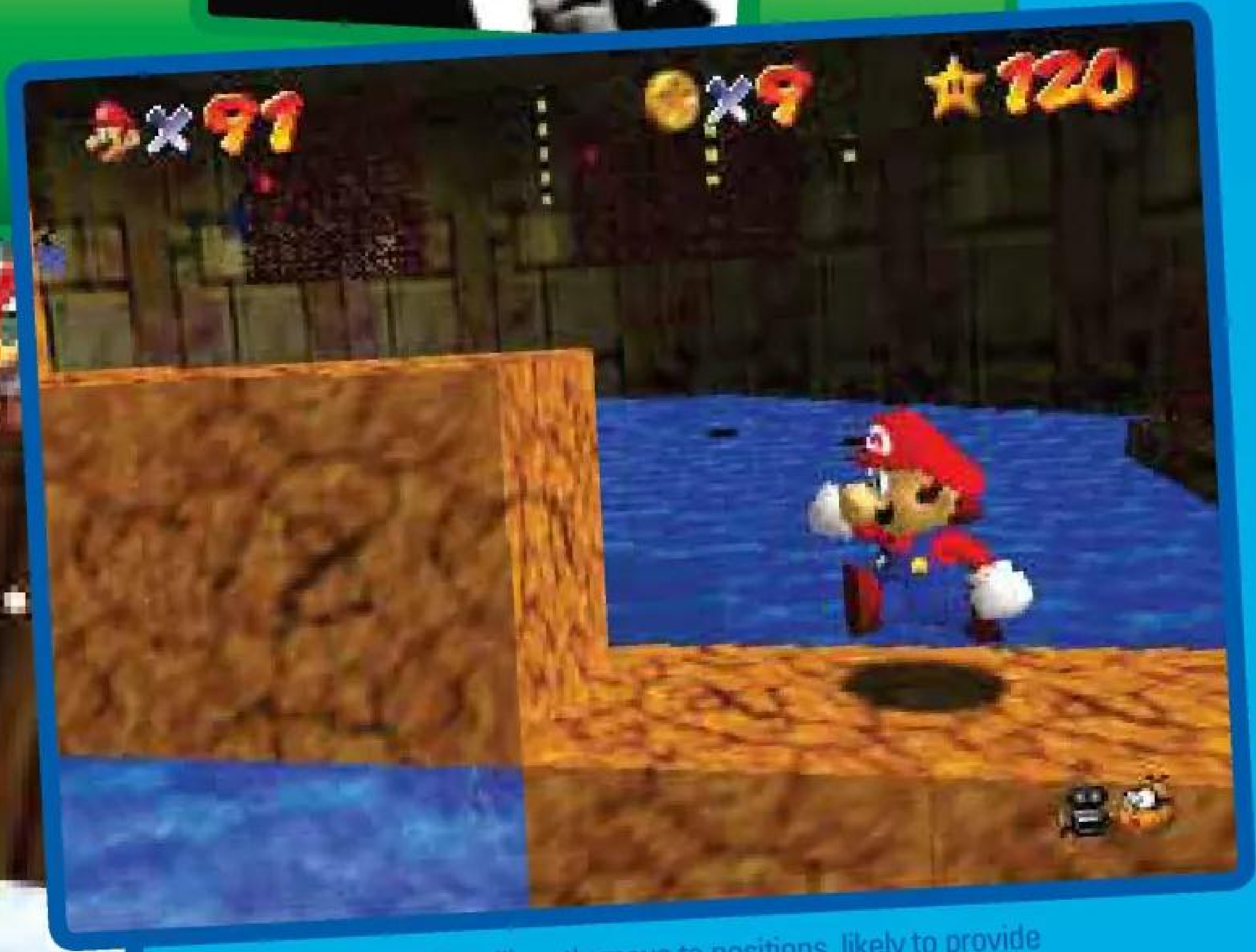
■ Performed in the same manner as the long jump, only with B instead of A. This will earn you extra style points, but it's far from an essential part of Mario's repertoire.

WALL JUMP (Jump at wall, analogue stick away) + A

■ After launching himself directly into a wall, Mario can kick off it to change direction and gain height. Timing and execution are tricky, but mastery allows for some amazing shortcuts.

> **"With Super Mario 64 being the first of its kind, that became the de facto place to look for inspiration to solutions"**
>
> Chris Sutherland

» Chris Seavor was the brains behind *Conker's Bad Fur Day*.



» The camera would intelligently move to positions, likely to provide a helpful perspective.

▶ Instead of the simple 'reach-the-goal' gameplay of 2D platform games, each course in *Super Mario 64* offered a selection of challenges, each of which awarded a Star upon completion. They could range from simply locating red coins to defeating bosses, winning races or just difficult platform challenges. Even Peach's Castle, the hub through which every other level was accessed, held Stars to find. Naturally, every player had their favourite moments. "Cool Cool Mountain was a favourite," says Gregg. "The way the slide race connected the top of the level to the bottom was really clever and Mario getting stuck head first in snow after a long fall was pure, indulgent charm."

"My memory is really fuzzy, but when I try to recall anything it's like looking at my happier moments of childhood," says Paul as he recounts some personal highlights. "Swinging Bowser by the tail. Finding that bottle underwater somewhere and being convinced that it held a door to a secret zone or something. We thought there would be treats hidden everywhere, and usually there was. Chasing the rabbit, because it was running away so may as well, and being led to something special." Mark found himself astounded by the longevity of the game. "Even later on, after you'd been playing the game for hours, there were new things to see," he remembers, "like when Mario turned into liquid metal. You then have this completely metal Mario, like the baddy from *Terminator 2*."

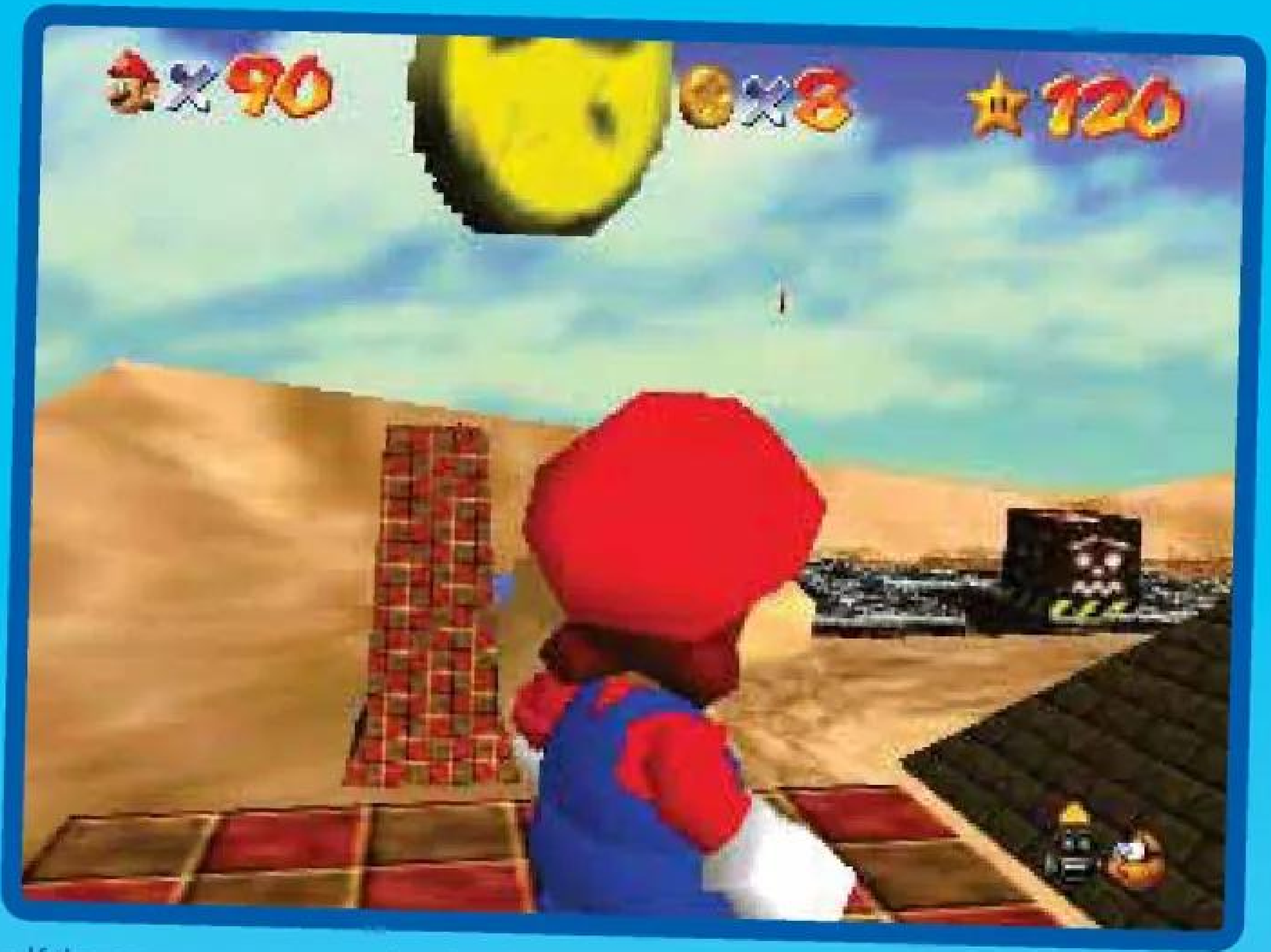
As soon as *Super Mario 64* became available in Japan on 23 June 1996, it received rave reviews from the press. The list of accolades could run for pages, so we'll cut it down somewhat – 97% from *GamesMaster*, 96% each from *N64* and *Total 64*, 95% in *64 Magazine*. For the first time ever, *Edge* awarded its highest score of 10. Paul Davies called it "the best console game ever" in *Computer & Video Games* and he wasn't alone in making that claim, as *Maximum* concurred in its final issue. Enormous sales success accompanied the critical acclaim, with over 11 million copies making their way to players.

While *Super Mario 64* served as a source of boundless joy for players, it served as an enormous kick in the rear for developers of other 3D games – Nintendo was way out in front and everyone else was playing catch-up. "Every developer studied that game. Even more than ten years later it was quite common to see programmers boot up *Mario 64* to see how some aspect of the controls or camera systems worked," says John. "I'd say the first result of that was *Tomb Raider* which clearly benefited from that Shoshinkai 95 showing – particularly with the swimming controls."

Mark has a similar take on the game's influence. "It did definitely pave the way for the next generation of 3D platformers. Later games like *Banjo Kazooie* and *Donkey Kong 64*, two of my most favourite N64 titles, wouldn't have been as good had *Mario* not been as well put together," he remarks. "You can just see the programmers at Rare having *Super Mario* set up next to their stations looking at it and saying, 'Right, now we have to do *that* bit better.' And in a lot of cases, they did. But Mario showed the way forward."

Mark is dead on the money – the developers at Rare were definitely influenced by the work of what was then their parent company when creating those games. "At the time we [were] experimenting with a '2.5D' look for a platform game that felt like an evolution of the *Donkey Kong Country* games we had created, but after seeing *Mario 64* we knew fully-3D worlds were going to be the future," Gregg confirms. "In the past if we've looked to solve a problem we'd often look to see how other games have tackled similar issues," Chris Sutherland says. "With *Super Mario 64* being the first of its kind, that became the de facto place to look for inspiration to solutions when we started building 3D platformers on N64."

However, there were definitely areas in which the *Banjo-Kazooie* team looked to improve upon the *Super Mario 64* experience, and they put a lot of effort into distinguishing their game from Nintendo's classic. "We wanted to ensure *Banjo-Kazooie* had the Rare feel. I wanted Banjo the bear to have a very solid and predictable feel to his control, as opposed to the higher level of skill required to master the inertia that sometimes made *Mario*'s control challenging," notes



» If the camera ever proved unhelpful, you could even utilise a Mario's-perspective camera view.

» Mario's classic animations were transferred flawlessly into 3D, like this jumping motion.

Gregg. "I also wanted our worlds to feel a lot more grounded, basing each one in believable realism that was given a fantastical and humorous twist."

"We wanted to see more visual detail," Chris Sutherland elaborates, "especially as we'd just been producing very detailed prerendered visuals with games like *Donkey Kong Country*. The challenge is to not overwhelm the player with detail – it still needs to be clear what items can be walked on, when a floor is slippy and so on. Likewise, we wanted the architecture/geometry of the worlds to be more complex and interesting – but in doing so, the camera that follows the player needs to become more complex and clever to handle unusual situations and to avoid confusing the player."

Getting the camera right is a task that Gregg remembers vividly. "When I played *Mario 64* I didn't feel the camera was that good, but the reality of just how hard a job this is to get right become apparent when we created our own camera systems," he reminisces. "In hindsight, *Mario*'s camera had the right goals in trying to be as dynamic as possible and mostly got it right. The 3D worlds that we created were even more complex than *Mario*'s and created major headaches for us. Sadly a good camera system is invisible and something nobody talks about, but one that has even minor problems gets a lot of attention."

With Rare more accustomed to 3D game development by the time of *Conker's Bad Fur Day*, ▶

» Metal Mario: he's heavy, but pretty unlikely to try to murder John Connor.

PLUMBING THE DEPTHS

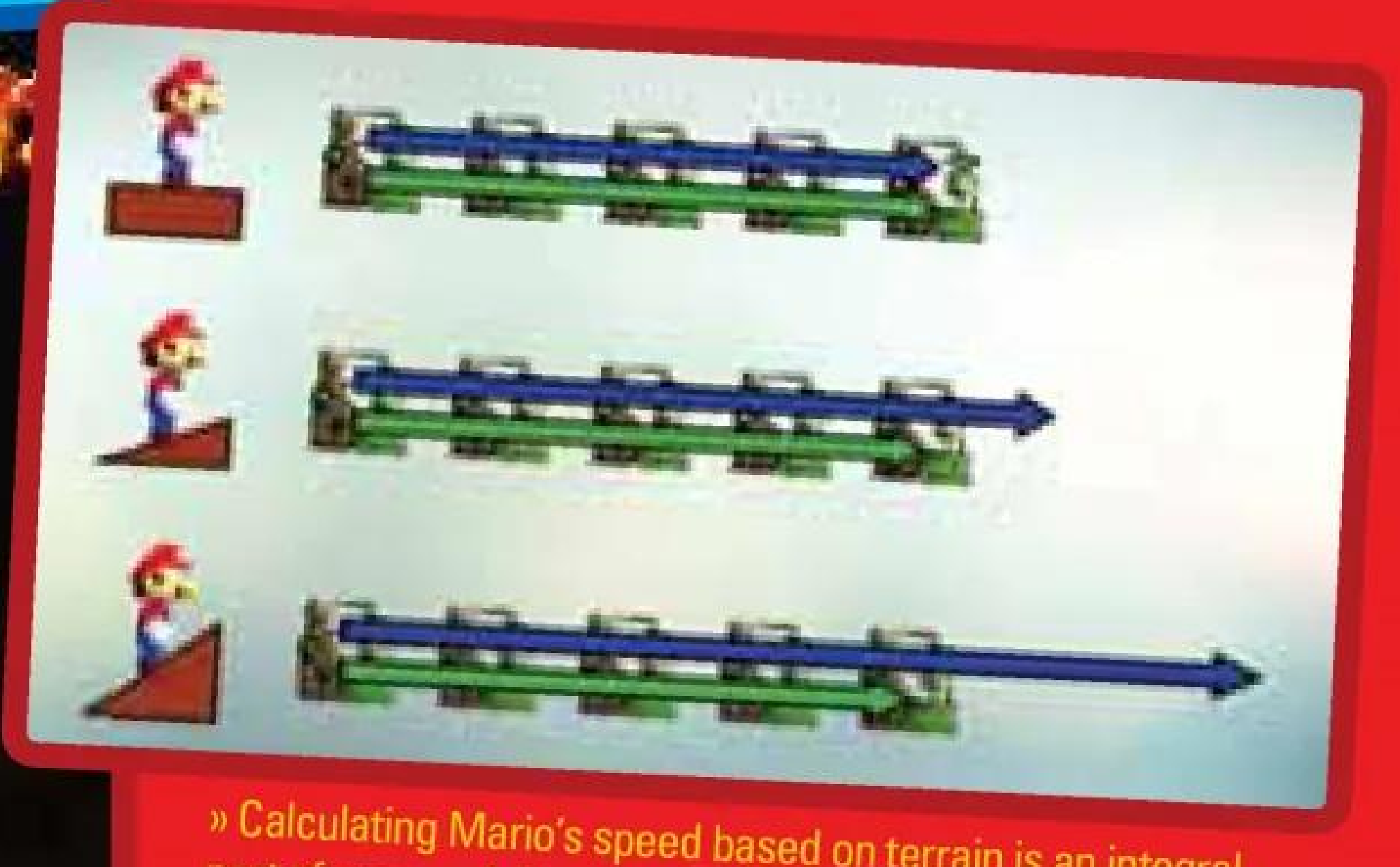
Pushing Mario 64 in ways you wouldn't believe

As one of most-played games on the speedrun circuit, *Super Mario 64* has been pushed to the limits over the 20 years since its release. Countless bugs, glitches and quirks have been discovered in that time, some of which help towards the goal of getting completion times down, while others actively go against that concept. On the former front, various skips have been found that avoid triggering instances of text or brief cutscenes, each shaving valuable seconds off times. Far more noticeable, though, are the effects of the more significant glitches, most of which involve performing a backwards long jump (or BLJ for short) or some variant thereon. These can be used to skip the Star Doors that would otherwise gate access to the Bowser encounters, as well as the 'infinite staircase' that leads to the final level and showdown, making it possible to clear the game with far fewer than the 70 Stars usually required – the minimum was thought to be one (Board Bowser's Sub in Dire, Dire Docks) for a good while until an even more complex version of the BLJ trick was found that let that stage be skipped as well, opening the door to 0-Star runs (and ironically doing so without opening the door). These tricks allow for the credits to be reached in just a little over five minutes, while various categories exist for players who would still chase world record pace without having to use said tricks to do so.

» *Super Mario 64* is the most popular game on speedrun.com, with over 1,000 runners across a bunch of categories.

At the other end of the spectrum lies the work of YouTuber pannenkoek2012, whose channel is filled with literally hundreds of videos in which he does everything from collecting every possible coin in each level to showcasing various glitches and oddities in the game that you won't see in a more refined speedrun where they would literally only cost time. More recently, however, he has found fame for a series of videos in which he attempts to collect many of the game's Stars in as few presses of the A button as is possible. These challenge runs, while interesting, only really started to garner attention in the last year or so, with commentated versions of several videos going so deep into the science of how each run works as to turn glitch mastery into an art form. In these videos (which are incredible, it must be said), you'll see how every stage exists on a near-infinite grid of so-called 'parallel universes', which have collision but no geometry; you'll hear terms like 'QPU Alignment', 'Syncing Speed', 'Half A-Press' and 'Held Object's Last Position' used in explaining feats of extreme mechanical manipulation; you'll discover just how long Mario needs to run on the spot in certain locations to build up enough speed to perform some of these crazy glitches (spoilers: it's *12 hours*).

Many of us reflect on *Super Mario 64* as an incredible highlight of our gaming lives – an amazing introduction to 3D gaming that set the stage for much of what came after. But for others, it's an obsession. And whether that means treating it like a race or like an in-depth science experiment, the fact that players are still discovering new things about this game two decades after release is nothing short of incredible.



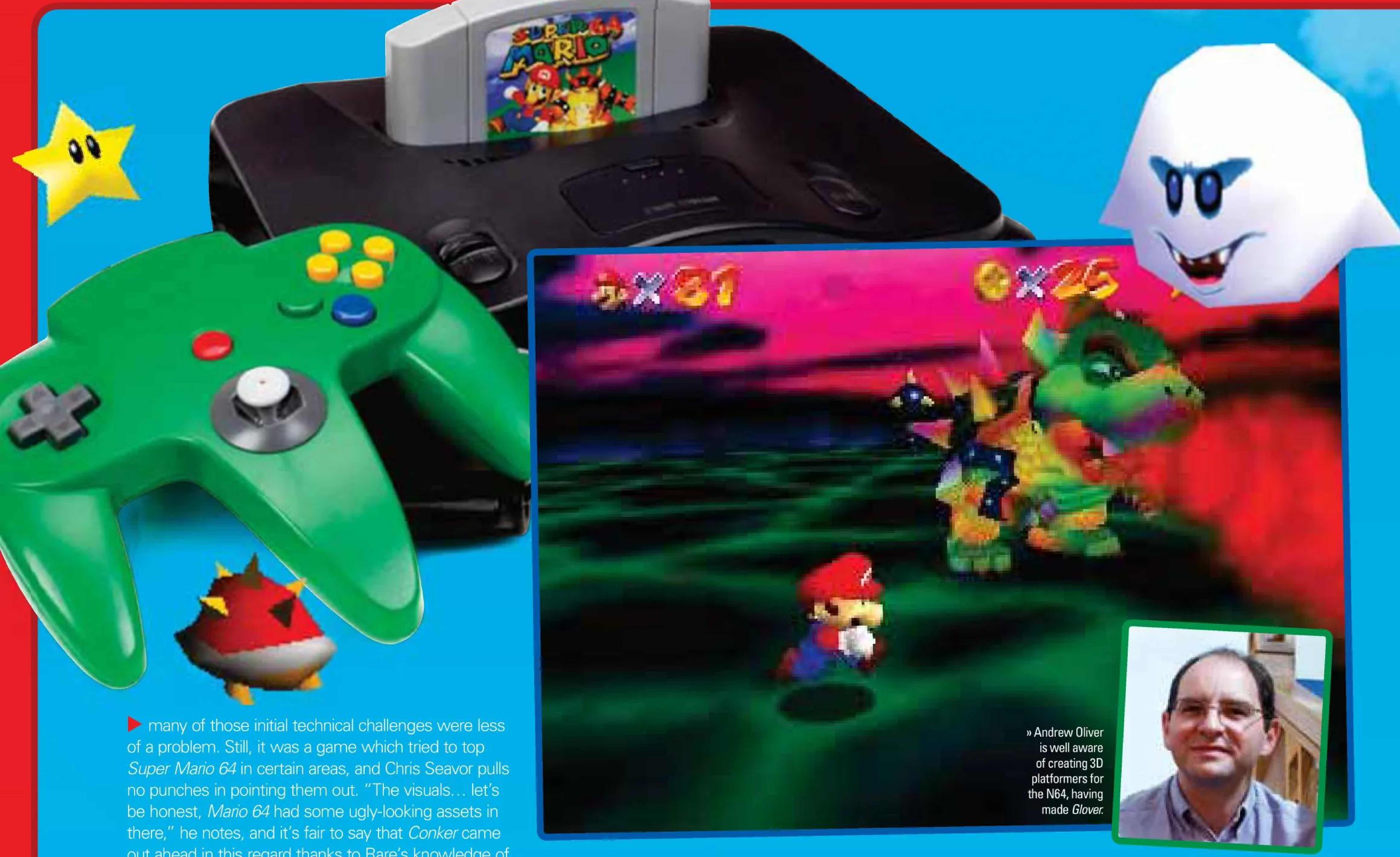
» Calculating Mario's speed based on terrain is an integral part of successfully visiting parallel universes.

Further Reading:

speedrun.com/sm64 - The fastest runs of the game – 70-Star and 120-Star runs are pure skill exhibitions, while lower categories combine this with glitch exhibitions.

tasvideos.org/SM64TASHistory - Tool-assisted videos that show optimal routing and the evolution of glitch-led runs, from the first 16-Star run back in 2005 to the effectively perfect run recorded in 2012.

youtube.com/pannenkoek2012 - pannenkoek's YouTube channel, which goes into insane depth on just how far *Super Mario 64*'s mechanics can be twisted and broken.



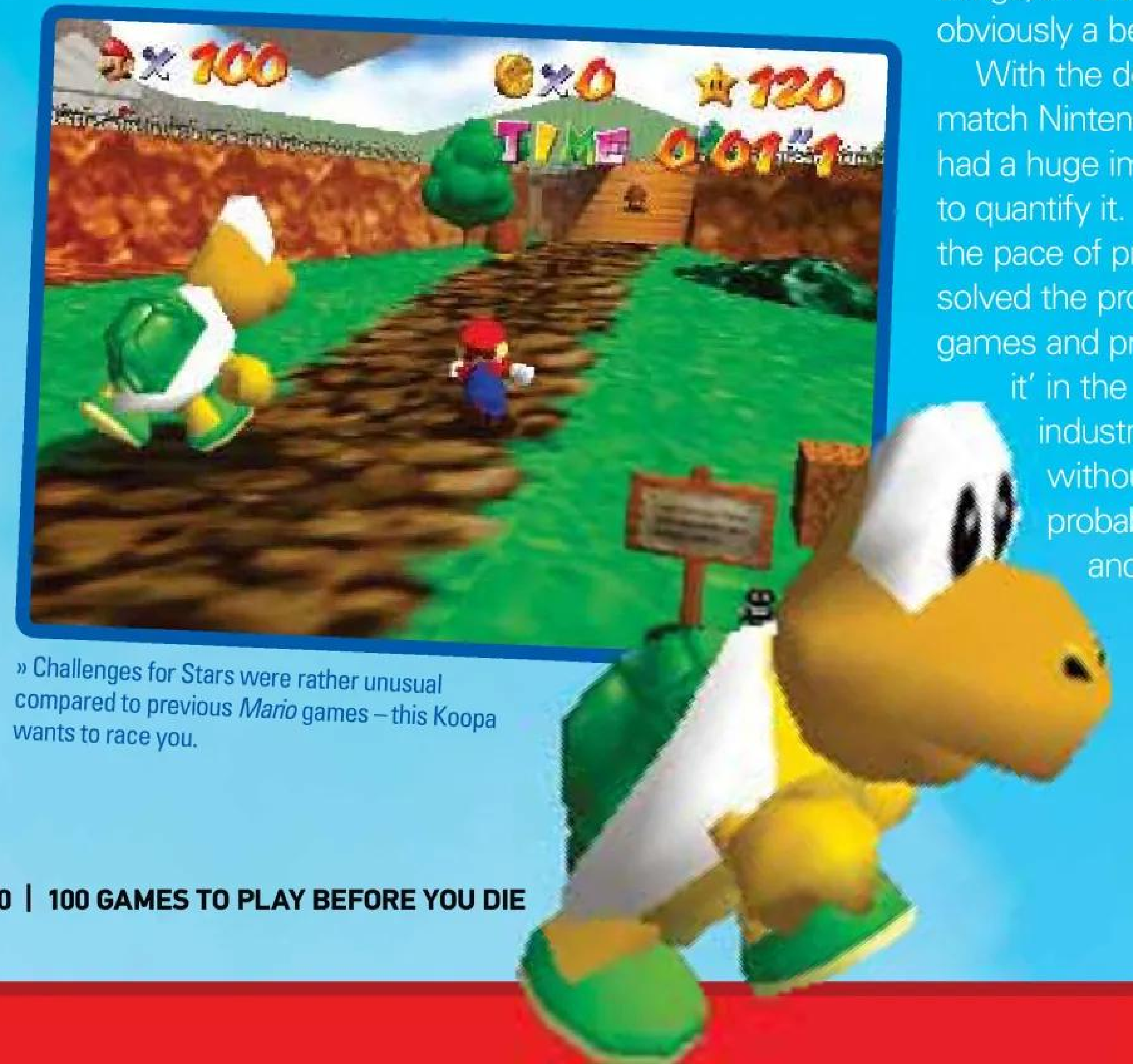
» Andrew Oliver is well aware of creating 3D platformers for the N64, having made *Glover.*

many of those initial technical challenges were less of a problem. Still, it was a game which tried to top *Super Mario 64* in certain areas, and Chris Seavor pulls no punches in pointing them out. "The visuals… let's be honest, *Mario 64* had some ugly-looking assets in there," he notes, and it's fair to say that *Conker* came out ahead in this regard thanks to Rare's knowledge of the N64's hardware, and particularly its texturing quirks. The structure of the game was tweaked too. "We also added more of a narrative to the world, driving the player forward not so much to get the next Star, but to see where the stories and characters lead you."

Still, Gregg is under no illusions as to how difficult it was to compete with such a groundbreaking game. "*Mario 64* got so many things right that it was hard for following games to make significant improvements," he opines. "Other games had more impressive visuals, used the performance of the hardware better and created worlds that had more depth, but few got close to matching things like *Mario*'s control."

Over at Interactive Studios, the *Glover* team witnessed the same thing. "*Mario* set a high bar of quality to meet," says Andrew. "We were prototyping *Glover*, first on PC and then on an N64 dev kit, and we were getting great results that we were very happy with. But suddenly, we were playing a huge game that had solved a few problems more elegantly that we had. For example, it had smoothed-skinned characters, unlike the hinged, segmented 3D characters that PlayStation and *Glover* had! We decided we had to ensure our characters looked just as smooth and had to work out how to make an animated skinned character renderer." That wasn't the only innovation that Andrew and the *Glover* team had to compete with. "We just spent ages trying to work out what the logic was for the camera so we could get somewhere close," he remarks. "Technically we figured out most things, as *Glover* demonstrates, but *Mario* was still obviously a better game."

> **"Mario 64 got so many things right that it was hard for following games to make significant improvements"**
> Gregg Mayles



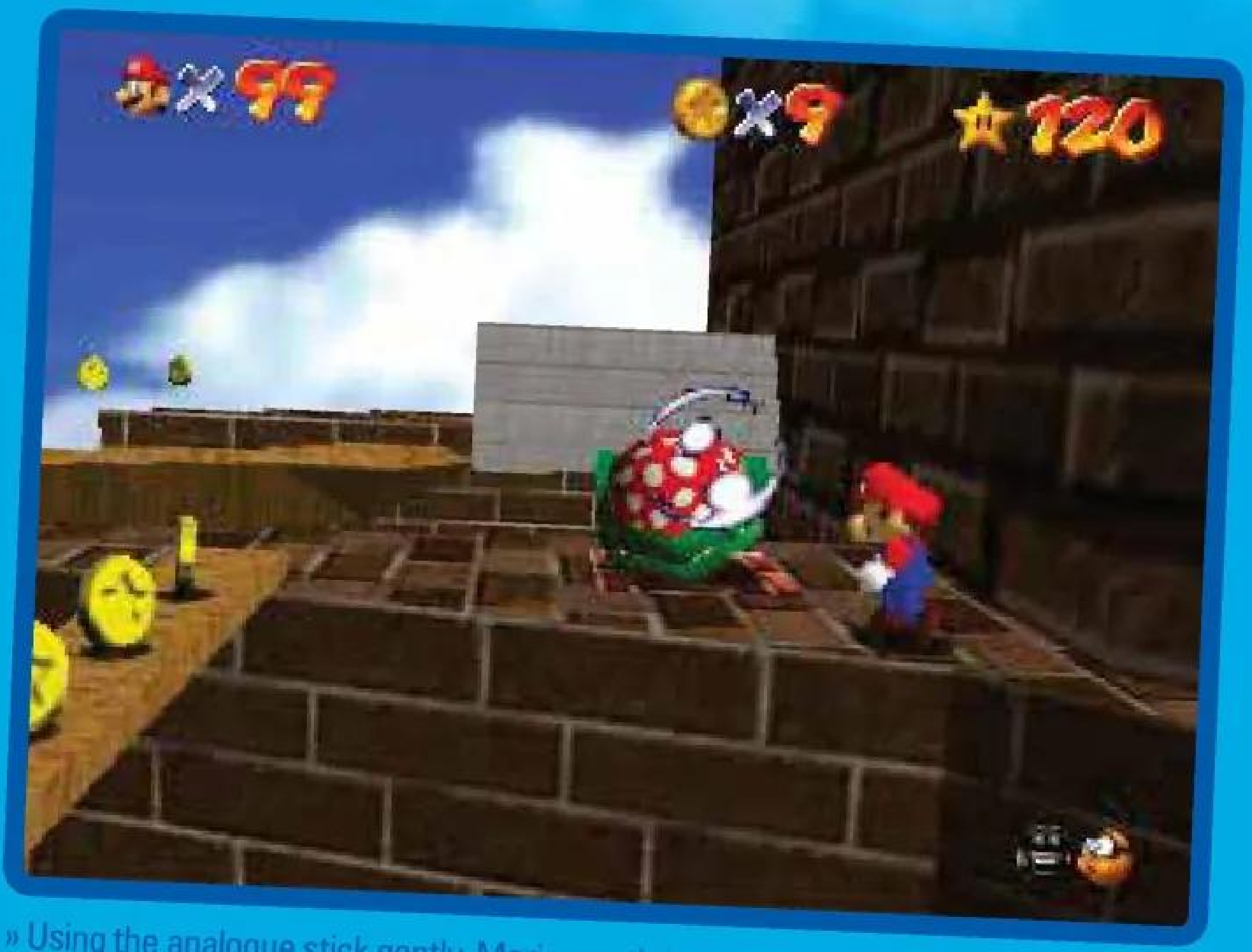
» Challenges for Stars were rather unusual compared to previous *Mario* games – this Koopa wants to race you.

With the developers telling us how far they went to match Nintendo's effort, it's clear that *Super Mario 64* had a huge impact on videogames, so we asked them to quantify it. For John, it was a game that accelerated the pace of progress in game development. "Nintendo solved the problems of third-person control in 3D video games and presented the industry with a 'how to do it' in the form of *Mario 64*," he says. "I think the industry would have figured it out eventually without Nintendo's help but *Mario 64* saved us probably five years worth of failed experiments and clunky controls."

For Andrew, it was nothing less than proof that polygon technology was actually viable. "It made everyone realise that 3D was the future, and not just of driving games, but all games! It looked so good, and gave some personality to the characters," he says. "The worlds were big and interesting and it immersed players in a deep and beautiful fantasy world. Over on the PlayStation, it still felt that 3D was struggling and whilst technically impressive, the gameplay or graphics were generally suffering for the 3D experience. *Mario 64* showed the way forward for the whole industry!"

"It was the first of its kind and a genuine 'Wow Moment' in gaming that excited even the most jaded of people. It was a combination of revolution combined with one of the most prominent and successful series of games," says Gregg, summarising the legacy of the game. However, he also adds a important point: "It's also stood the test of time. Play *Mario 64* today and it's still got the ability to transform you into a playful child where just doing things without thought is great fun."

That's the key thing to remember about *Mario 64*. It was undoubtedly a groundbreaking and technologically-impressive game, as the developers we've spoken to have testified. Time marches on though, and other games have entered the conversation as points of reference for 3D game design. If *Super Mario 64* had just been a technical achievement, we'd remember it as an important release. But *Super Mario 64* was always a supremely enjoyable game first and foremost – and the decades that have passed since it released haven't dulled that in the slightest.

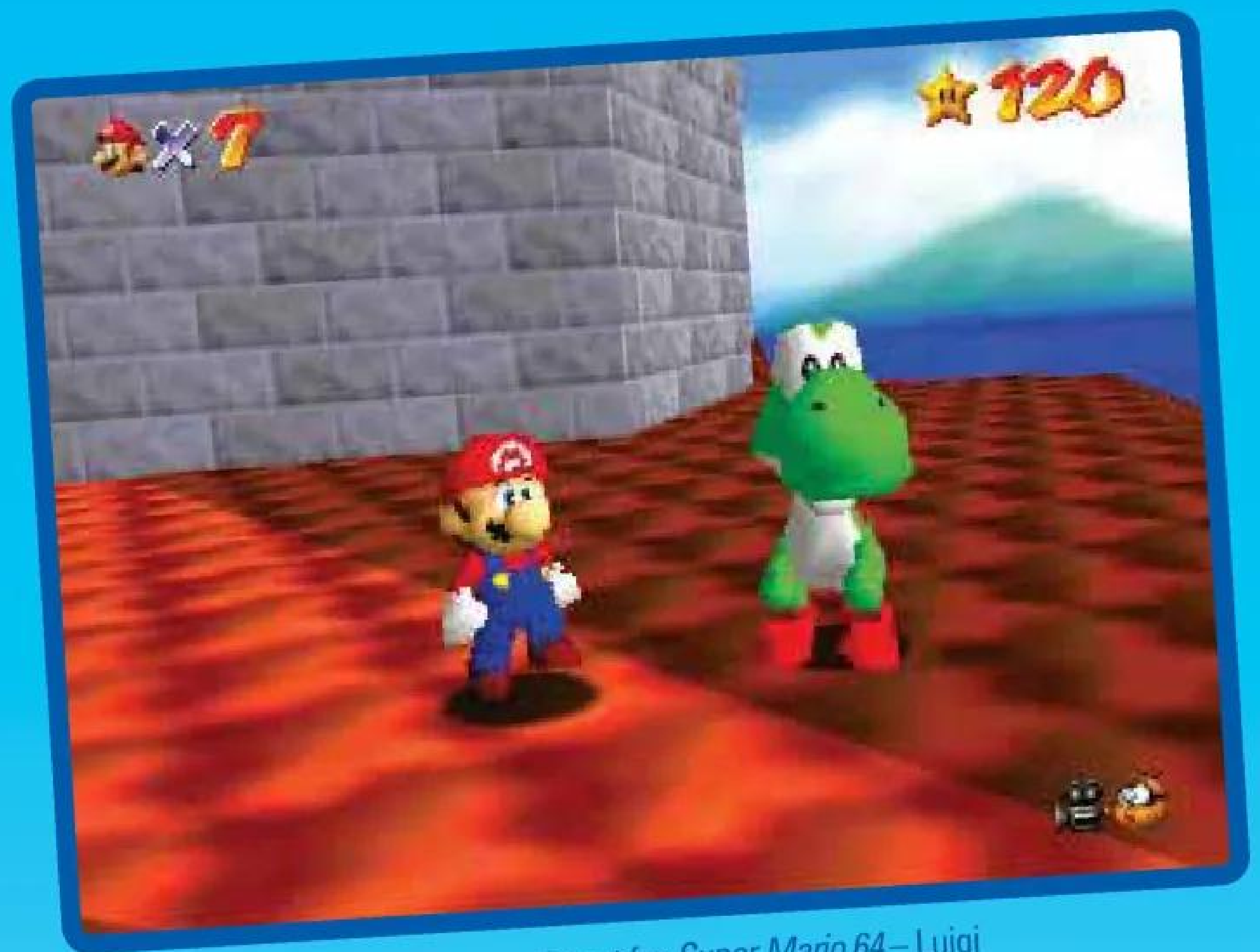


» Using the analogue stick gently, Mario can tiptoe past this sleeping enemy without waking it.

There were years when I didn't play it and when I got back into retro games I worried that it might not have aged well and I was hesitant to have another go at it," Mark confesses. "But I can happily report that even now, *Mario 64* is still one of the best and most fun games to play on any machine *ever*!" He's in no doubt as to why that is, too. "Nintendo didn't just rely on the graphics to wow everyone, they also concentrated on the puzzles and gameplay. So they still spent as much time on the gameplay as they had done on the previous *Mario* titles but had added in this huge world that seemingly burst out of this little bit of plastic you just stuck in the top of your machine before you turned it on."

That's why *Super Mario 64* is still as relevant today as it has ever been. The kids who grew up with N64s are adults now, and their love for the game and its successors is the reason behind the success of crowdfunding campaigns for traditional 3D platformer revivals, including *A Hat In Time* and Playtonic's *Yooka-Laylee*. *Super Mario 64*'s supreme gameplay is the reason that people are still playing today, years after most people nabbed that last Star and had a chat with Yoshi on top of the castle. People simply aren't tired of the game – and if you needed any proof of that, hop online and look at the abundance of *Super Mario 64* speedruns, challenge runs and modified versions.

But don't take our word for it. Dig out a copy of *Super Mario 64* and start up a new file. Spend a minute or two pottering around the castle to get a feel for how Mario controls before leaping into Bob-Omb Battlefield. We'd be surprised if those few minutes don't turn into hours – and years later, developers are still trying to make games that are so compelling. ✱



» Most of the extended cast was absent for *Super Mario 64* – Luigi doesn't appear, and Yoshi only has a cameo.

LEAPS OF FAITH

Five games that made the jump to 3D in style…

METROID PRIME 2002

■ Many wondered how the exploration of *Metroid* could ever work in 3D, but Retro Studios came through with the perfect answer. Encapsulating *Metroid*'s sense of isolation and freedom, while being a showcase for the GameCube, it's one of the greatest examples of 2D-to-3D done right.

THE LEGEND OF ZELDA: OCARINA OF TIME 1998

■ Just as it had done with *Super Mario 64*, Nintendo embraced the third dimension when updating *Zelda* for a new generation. The game was imbued with a very real sense of verticality that helped make it absolutely jaw-dropping.

GRAND THEFT AUTO III 2001

■ Alongside *Super Mario 64* and *Ocarina Of Time*, *GTA III* was instrumental in establishing the template for modern 3D games, especially open world titles. Minimal prelaunch fanfare only made its impact all the more incredible and it had a real sense of place and personality.

Cloud
Vincent
Cid
1760 1969
1490 1490
1024 1024

FINAL FANTASY VII 1997

■ A curious case study, as the move to 3D graphics actually had little impact on the gameplay formula. It did, however, allow for impressive cutscenes and a more cinematic feel – two things that both tied in beautifully to the greater storage capacity CDs had over cartridges.

METAL GEAR SOLID 1998

■ As with *FFVII*, the polygons of *MGS* allowed for a then-unprecedented level of cinematic presentation. Kojima and his team took this concept and ran with it, too – Snake's PlayStation sneaking mission is widely accepted to be the birthplace of modern cinematic gaming.

…and five that stumbled and fell into the depths of infamy

FADE TO BLACK 1995

■ Many would argue that *Flashback* never needed a sequel, and this oddity serves as evidence for the truth of that statement. Crude 3D visuals were a far cry from the mind-blowing original, it's redeemed somewhat by its decent character animation.

BUBSY 3D 1996

■ Famously one of the worst games ever made, this took the unlikable *Sonic* rip-off, dumped him into an ugly 3D world that looked to be made out of placeholder assets and left it at that. Random deaths and horrendous pop-in abound in this abhorrent waste of time and money.

EARTHWORM JIM 3D 1999

■ Handing the reins to an untested developer for something so difficult as making the jump from 2D to full 3D doesn't sound like the best of plans, as this effort proves. Bland environments were a departure from the colourful backdrops of the original and the camera had a mind of its own.

CASTLEVANIA 64 1999

■ One of the reasons people thought *Metroid* could never work in 3D was that *Castlevania* struggled to transition. Camera once again proved to be fatally flawed in early attempts at 3D vampire hunting, at odds with the pinpoint precision for which the series was known.

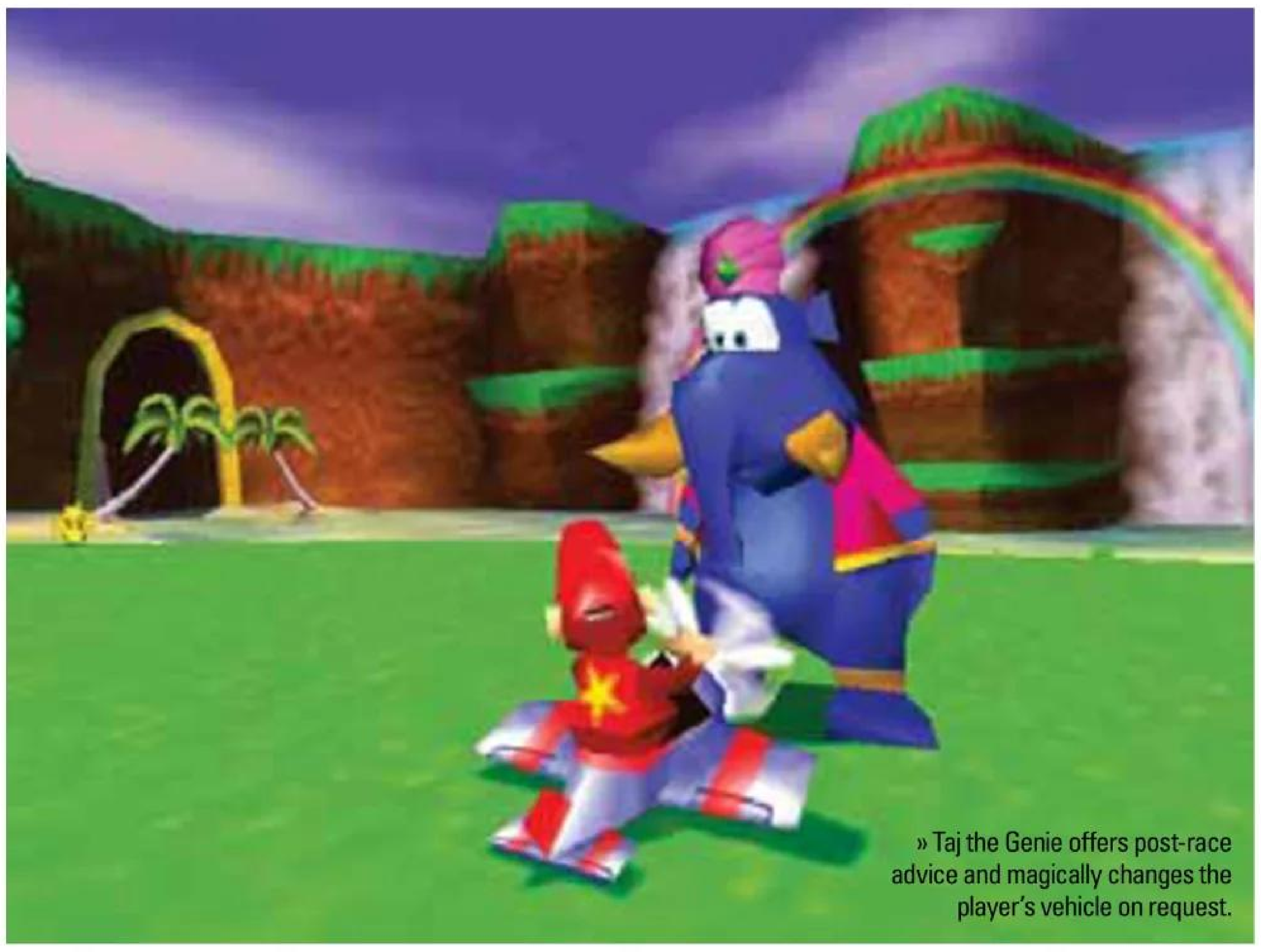
PRINCE OF PERSIA 3D 1999

■ While this 3D debut wasn't as dreadful as some efforts, its poor control and awkward animations were just made to look even worse thanks to how impressive these aspects had been in the original game. The camera was also horrible – a standard pitfall of 3D gaming.

DIDDY KONG RACING

Inspired by Mario 64 as much as Mario Kart, Diddy Kong Racing sold millions worldwide. Rory Milne asks Lee Schuneman, Kev Bayliss, John Pegg and Richard Gale about their adventure-racer hybrid

D*iddy Kong Racing* wasn't always called *Diddy Kong Racing*. In fact, Lee Schuneman, the game's producer, wasn't even making a racer until a member of the development team stuck a mammoth on a moped. "We didn't have much playable," Lee begins, "but Lee Musgrave had come up with a woolly mammoth riding on a moped for some random reason and Chris Stamper decided we should stop doing [an] RTS and make a racer instead."



» Taj the Genie offers post-race advice and magically changes the player's vehicle on request.

After switching genres, Lee's project was initially named *Wild Cartoon Kingdom* and then *Adventure Racers* around which time artist Kev Bayliss, coders John Pegg and Richard Gale, and others joined his team. "They were just different titles as the game evolved," explains Lee, "many aspects like being able to roam the central world were all there from the start of the concept, and what really evolved as we progressed were the racing mechanics – like drifting – and challenges." Kev's initial role on *Adventure Racers* was as character artist. "I was involved in the game at an early stage, when the team was relatively small, to help with the direction of the characters," he says. John remembers a badger protagonist and expensive hardware, "I recall *Adventure Racers* featuring Bumper on the title screen. All of our development was done using Silicon Graphics workstations – very much state of the art at the time – [with] internal expansion boards containing N64 development hardware." Richard dates his involvement as post-*Wild Cartoon Kingdom*, "I did work on *Adventure Racers* – development was all command-line based and custom tools."

Lee's expanded team soon gained approval for their project to go into development, renamed *Pro-Am 64* after Rare's NES classic. "Chris Stamper – who was software engineering on the RTS – made the decision, and that was it! We started it in probably August/September 1996. A decision was made that this game was going to be Rare published rather than Nintendo published hence using a Rare IP for the name. *RC Pro-Am* had been successful – having a name that people recognise always helps." Kev adds, "*Adventure Racers* was always going to be a fun, cute racing game, and so taking the 'toy' element from *RC Pro-Am* – they were radio controlled cars – and building upon that seemed to make sense."

> **"We wanted to push the adventure element of the concept"**
>
> Kev Bayliss

But rather than cars, *Pro-Am 64*'s team favoured karts, planes and hovercrafts, although not before Kev considered trikes. "We wanted to create a feeling that you were controlling toddlers on trikes. But they just didn't feel right to race in the game, and they didn't look right either," he says.

Given his project was greenlit shortly before *Mario Kart 64*'s release, it would be reasonable for Lee to take inspiration from Nintendo's racer, but the producer's influences lay elsewhere. "We hadn't seen *Mario Kart 64*, my inspirations were *Mario Kart on the* SNES and *Mario 64*," he highlights. Kev expands on *Mario 64*'s influence, "we wanted to push the adventure element of the concept. We wanted to see if we could move the genre into another direction."

Kev also recollects other Rare projects that proved influential in shaping *Pro-Am 64*'s character line-up: "As we were developing other titles at the same time that were about to launch with their own main characters, such as Conker and Banjo, we thought it would be a great idea to bundle them into the game."

A more unlikely inspiration explains *Pro-Am 64* being structured around a central area connected to themed worlds. "It was inspired by theme park design, I've always loved the work of the Disney Imagineers," enthuses Lee.

Asked about the themes chosen for *Pro-Am 64*'s worlds, Lee says their platforming elements gave him license to follow design conventions. "It all comes back to the core concept of this being a platformer world, but with racing, so of course there needed to be fire world, desert world [and] snow world – all the usual suspects!" Kev reveals some ▶

» Bumper eyeballs Diddy Kong on the Jungle Falls track while challenging Banjo for fifth place.

» Targeting Banjo on one of Crescent Island's sharp bends proves too much for Diddy.

» Competitors must hatch three eggs in a nest to win the Fire Mountain battle stage.

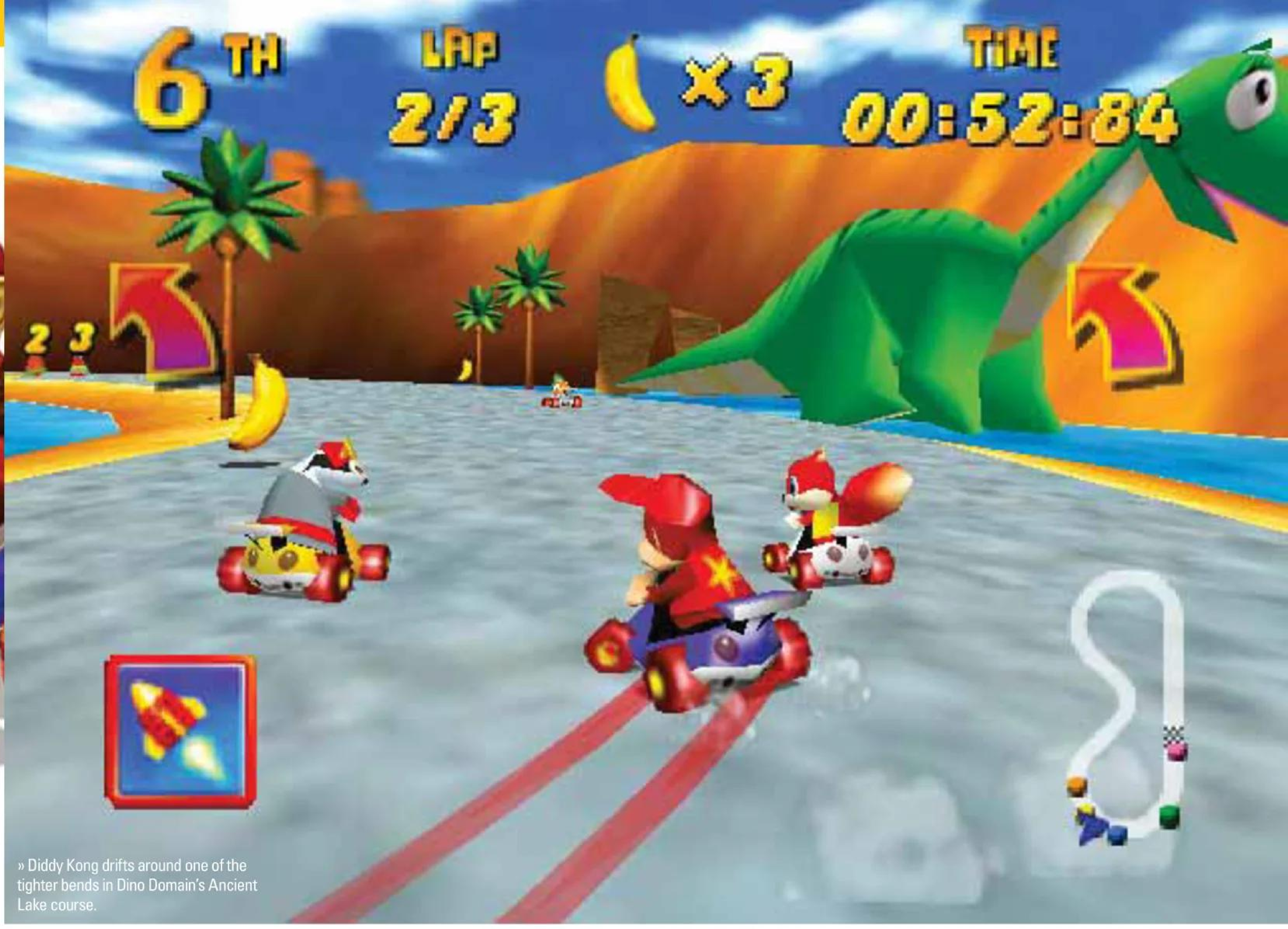
DIDDY KONG RACING

IN THE KNOW

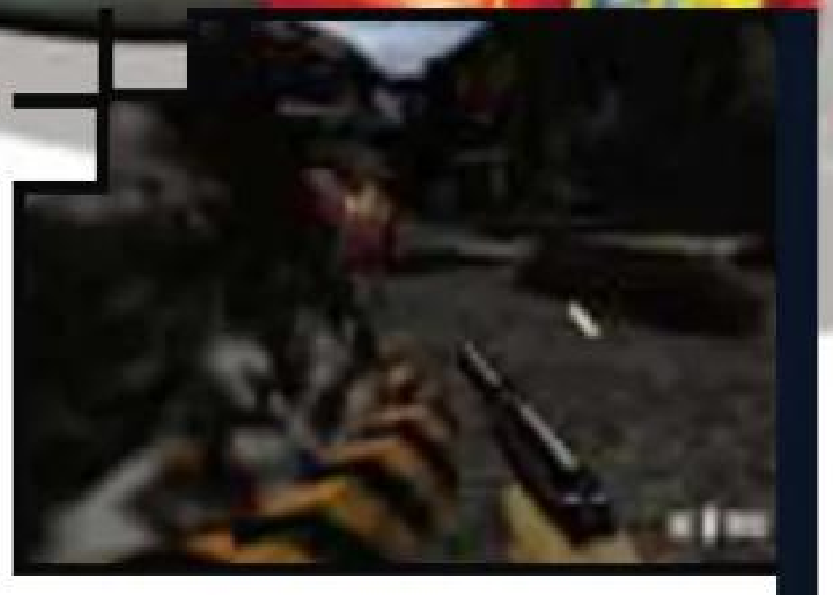
- » **PUBLISHER:** NINTENDO
- » **DEVELOPER:** RARE LTD
- » **RELEASED:** 1997
- » **PLATFORM:** N64
- » **GENRE:** ADVENTURE-RACER

DIDDY KONG RACING 101

■ Primarily a racer in gameplay terms, *Diddy Kong Racing* is defined as much by the cutscene storyline and collection-based challenges of its Adventure Mode. Success in these challenges – and winning races – unlocks a plethora of extra content such as additional courses, boss races, battle stages and a bonus world.



» Diddy Kong drifts around one of the tighter bends in Dino Domain's Ancient Lake course.



DEVELOPER HIGHLIGHTS

GOLDENEYE 007
(PICTURED)
SYSTEM: N64
YEAR: 1997

BANJO-KAZOOIE
SYSTEM: N64
YEAR: 1998

CONKER'S BAD FUR DAY
SYSTEM: N64
YEAR: 2001

▶ plans for the game's desert world. "The dinosaur areas were going to have more in the way of racing beneath stampeding Brontosauruses and across the backs of huge dinosaurs," he highlights. "I don't think we went that far due to the capabilities of the system."

As well as world design, *Pro-Am 64*'s racing aspect required track design, a multi-staged process initiated by Lee. "All the designs were done on paper. I would sketch them out and then one of the artists would build them in polygons," he remembers. "We'd get them into the game engine fast and start driving around. We would go back and fore, a little fine-tuning, and then I would have a tool that enabled me to edit props. The key to each track was that we played every one until [it was] perfect." Kev explains how the tracks were designed to encourage adventuring: "We were very particular about making the tracks nice to look at and almost try to lure the player off the main circuit to explore each environment by trying to ensure that every [aspect] of the tracks looked interesting and involving."

> **"The key to each track was that we played every one until it was perfect"**
> Lee Schuneman

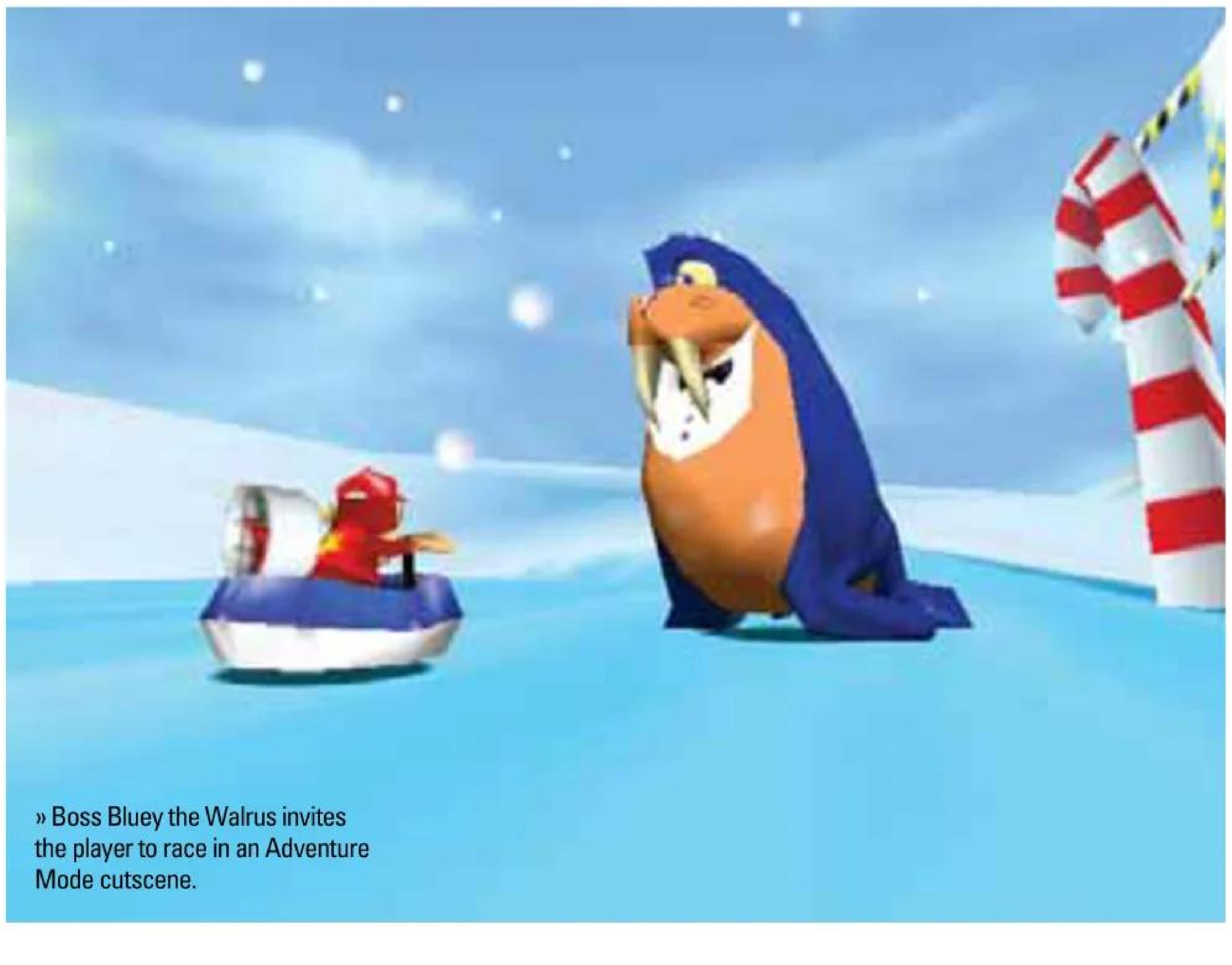
As *Pro-Am 64*'s worlds and tracks evolved so did the AI governing of its cast of competitors, which Lee likens to tabletop racing. "There were four 'lanes' – kind of like Scalectrix – and each lane was a different path around the track, some fast and others slow," he explains. "As you drove around you were 'rubber banded' to the other AI so they always felt close. However, for the highly-skilled we broke the rubber band so the others couldn't catch you up." John notes how each AI racer was made to feel distinct: "Each character had their own performance attributes that could be easily tweaked – for example, top speed, acceleration and rate of turn."

The addition of visually stunning power-ups and weapons helped *Pro-Am 64* realise its platforming aspirations – often in hilarious style. "There were certainly some clichéd *Wacky Races*-style weapons!" grins Kev. John elaborates, "the lead programmer, Rob Harrison, implemented the weapons and power-ups. Paul Mountain wrote the software for some of the associated graphical effects – like the shields and boost cones, [these] were 3D models with code to control their animation."

Pro-Am 64's adventure aspect required Kev to create a series of cutscenes that formed a storyline. "Lead software engineer Rob Harrison worked on a animation editor that was tailored to suit the game," says Kev. "I told Rob what I needed to create sequences, and he created an editor for characters to follow motion paths. I could flag up special effects, sound effects, and move the camera around anywhere. This was then used to create story sequences."

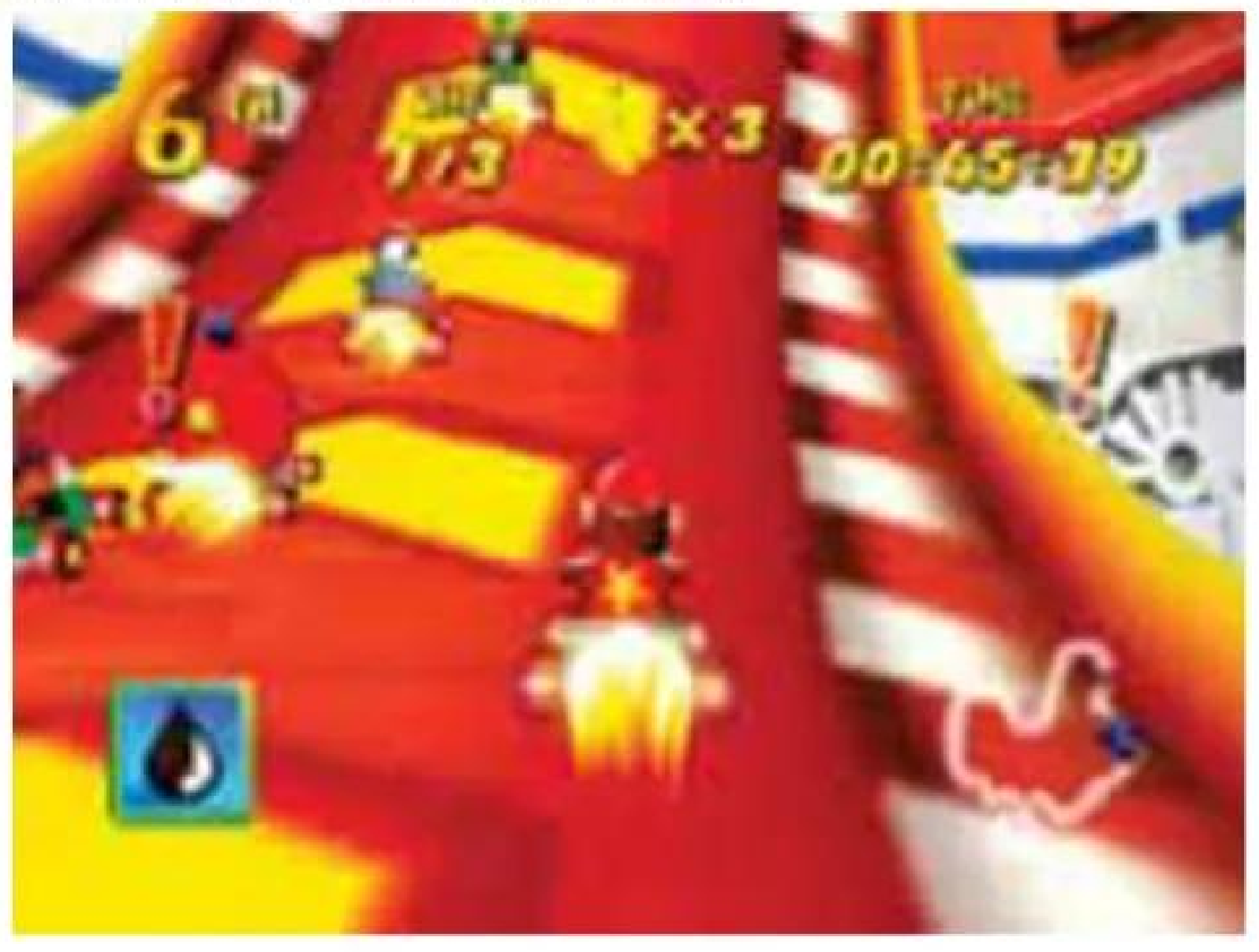
Collection-based challenges and unlockable competitors and tracks helped broaden *Pro-Am 64*'s gameplay and increase its replay value. "We wanted something that would take a while to complete," reasons Kev, "by adding the unlockable content I think we added longevity to the game's life and fun factor." John admits: "I remember the Greenwood Village silver coin challenge being particularly hard – I just couldn't complete it. Tim Stamper's son managed it, and rang me up to ridicule me. He must've only been about ten!"

Unsurprisingly, perfecting a platforming world of racing tracks replete with polygon racers on unfamiliar hardware provided challenges. "For quite a few of us, it was our first game and we had a lot to learn," concedes John. "Even for the team members

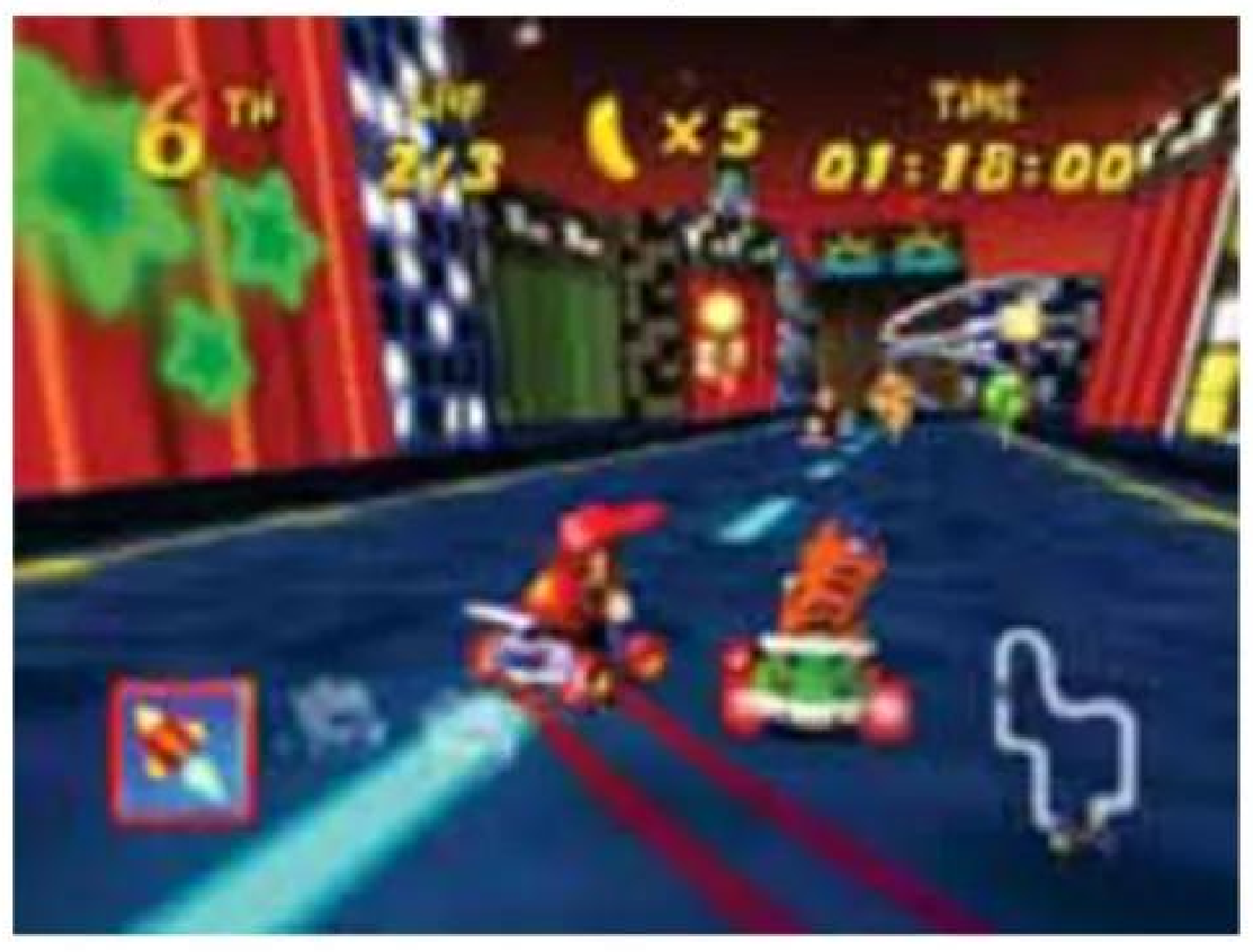


» Boss Bluey the Walrus invites the player to race in an Adventure Mode cutscene.

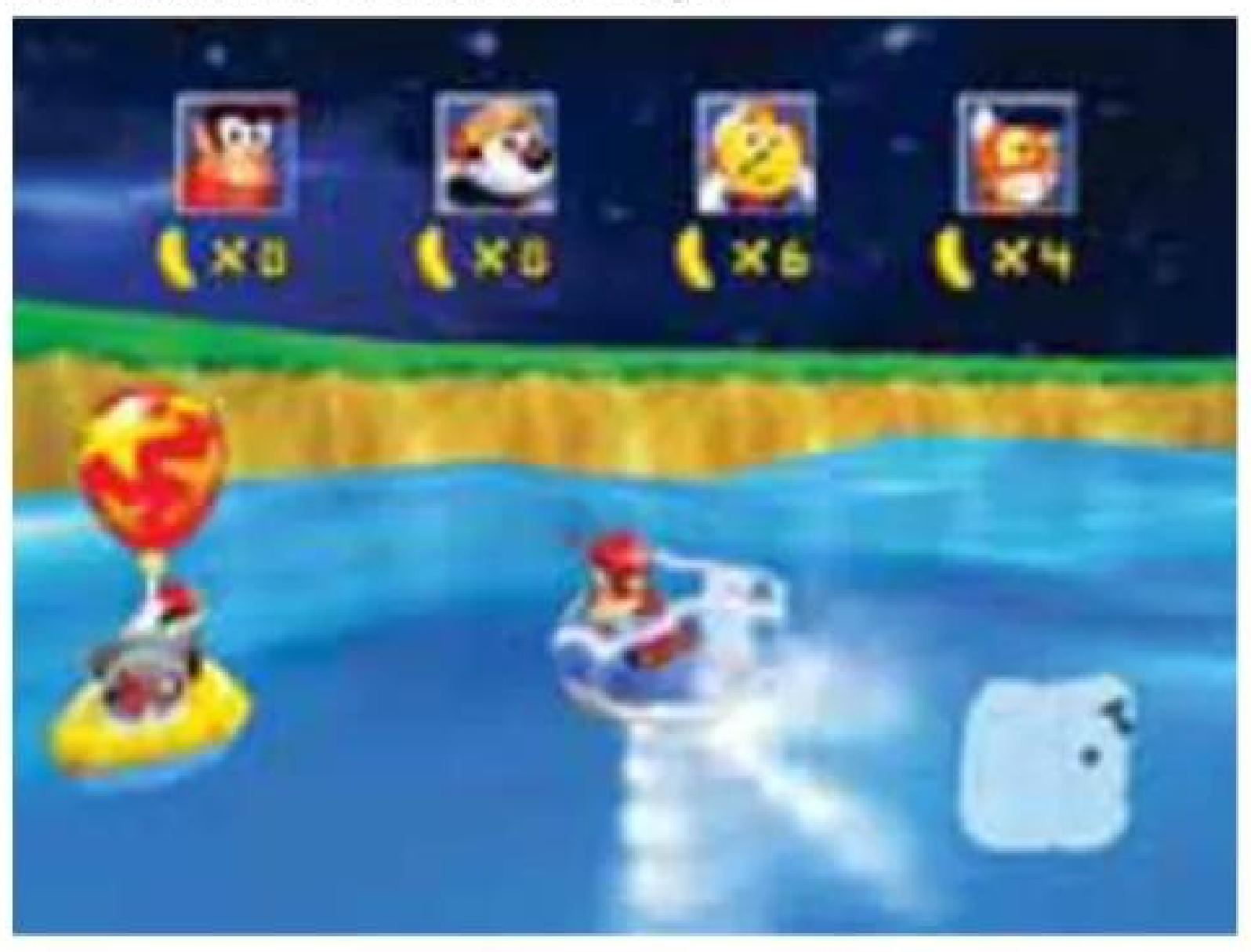
» Future Fun Land's Darkmoon Caverns features a pair of high-octane loop the loops.



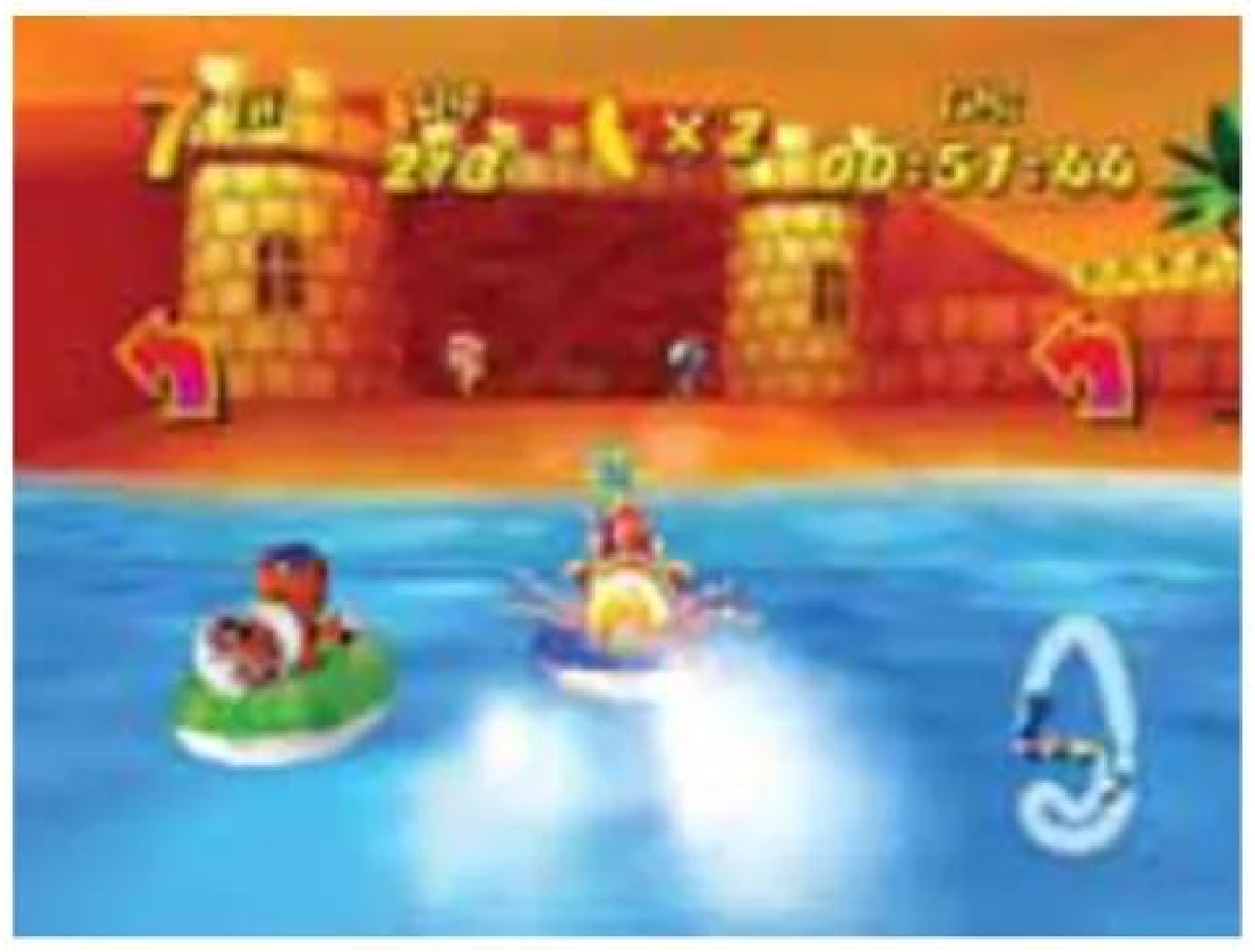
» Timber loses fifth place to Diddy as the cheeky monkey cuts corners in Star City.



» A shielded Diddy avoids losing one of four lives in the Darkwater Beach battle stage.



» A magnet power-up moves Diddy up a position in Sherbet Island's Pirate Lagoon.



who'd worked at Rare for a while it was quite a transition moving to the N64. In particular, the artists were having to learn how to produce 3D models that were simple enough that they could be rendered and animated by the N64 hardware in real-time."

As the team strived to make *Pro-Am 64* run faster, a clever compromise saw them trade polygons for sprites. "I personally liked the sprite wheels, plane propellers and hovercraft fans," reflects Kev. "This reduced the poly count for each vehicle creating a solid look on a relatively low number of triangles." John offers: "There was definitely a lot of effort that went into making [the game] mostly polygon based. Each vehicle / character combination was modelled at several levels of detail so as they moved further away from the camera they switched to a simpler model."

The spring of 1997 saw Lee demo *Pro-Am 64* to E3 attendees including Shigeru Miyamoto, which led to the racer gaining a new frontman. "My main memory is the reaction to the Tick Tock character for time trial – Miyamoto liked him! I imagine it was at this time that the *Diddy Kong* conversations happened with Nintendo and the Stampers."

A rebranding of *Pro-Am 64* as *Diddy Kong Racing* posed Lee's team few problems while raising their game's profile, but delays on Rare's intended Christmas title, *Banjo Kazooie,* handed them a challenging deadline. "By using Diddy, we had a strong brand, which helped to make the game what it was," Kev says of the rebrand. On festive deadlines, John remembers: "Everyone pulled out all the stops – we worked crazy hours to get it finished, but the team pulled together brilliantly."

Hard graft bolstered by an advertising blitz befitting a Rare Xmas release ensured phenomenal critical and commercial success for *Diddy Kong Racing.* "We had a great game with *Pro-Am 64,* but with the name change and marketing dollars it became a five million seller," Lee beams. "We were proud of the impact in Japan where I believe it went to number one." John comments on the game's critical success: "We'd been developing *DKR* in secret, so there'd been no build up in the press. I remember picking up the issue of a Nintendo magazine where *DKR* was revealed – that was the first article we'd seen, and the response was fantastic."

Asked for final thoughts, Richard succinctly offers: "To this day, I still get a buzz when I meet people that grew up with *DKR.*" John ends on a note of pride: "I'm still immensely proud of what we achieved, and it's great that people still play it." Kev has only happy memories: "It was one of most fun games I worked on – it was a fab team to be involved with." Lee's last words on *Diddy Kong Racing* are heartfelt: "None of us knew what we were doing, but we loved every second of making it. It's still fun to play, and I look back with fond memories." ✱

Thanks to Lee, Kev, John and Richard for sharing their stories from the *DKR* barn.

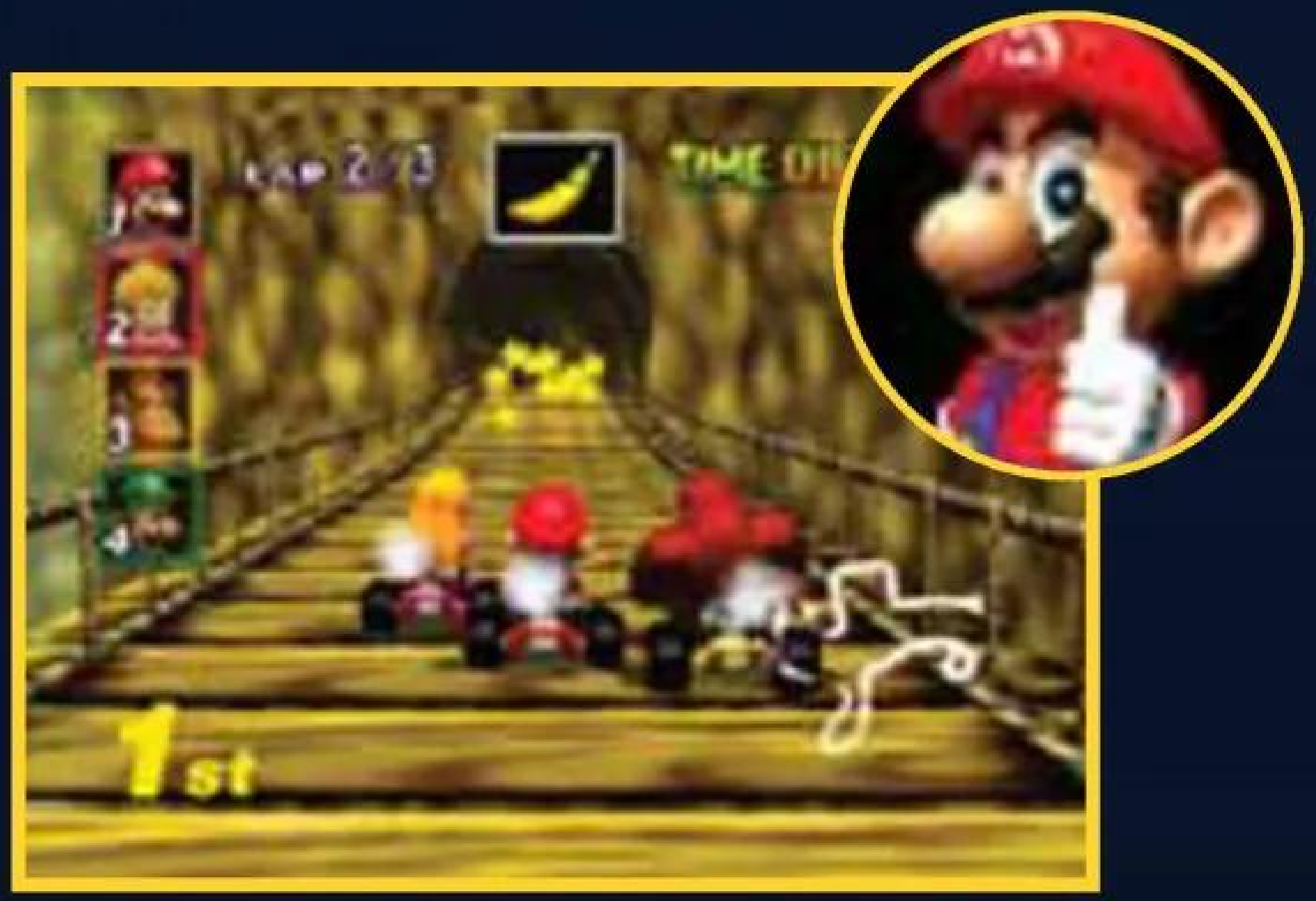
MEMORABLE MASCOT RACERS

More flagship character racing games

MARIO KART 64

■ SYSTEM: N64 ■ YEAR: 1996

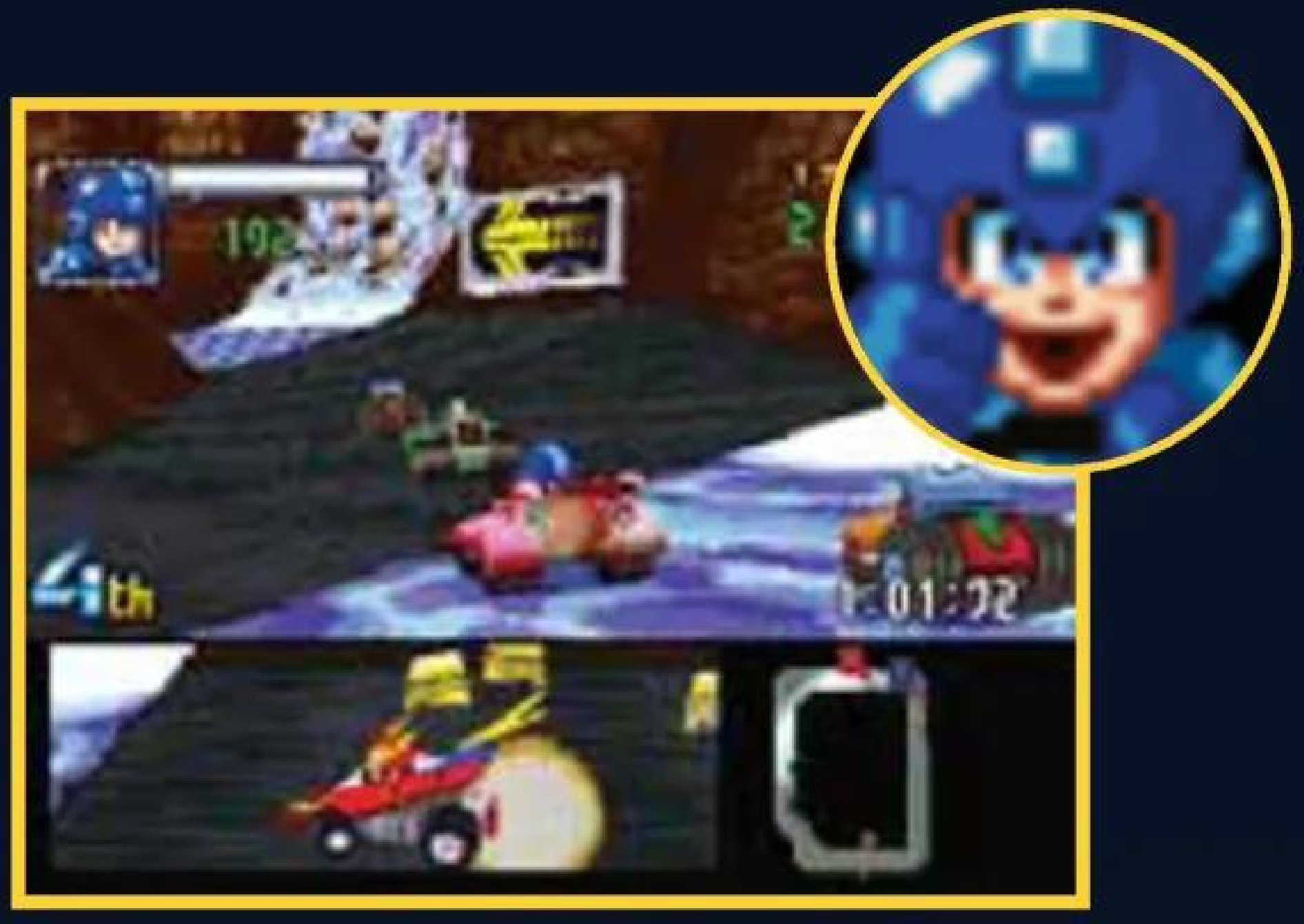
In order to run at top speed, *Mario Kart 64* mixes polygon courses with pre-rendered sprite karts. Although geared more towards multiplayer than its predecessor and weighted in favour of the AI competitors, the game's immersive worlds and polished tracks provide a stylish racer that's still enjoyable to play solo.



MEGA MAN BATTLE & CHASE

■ SYSTEM: PlayStation ■ YEAR: 1997

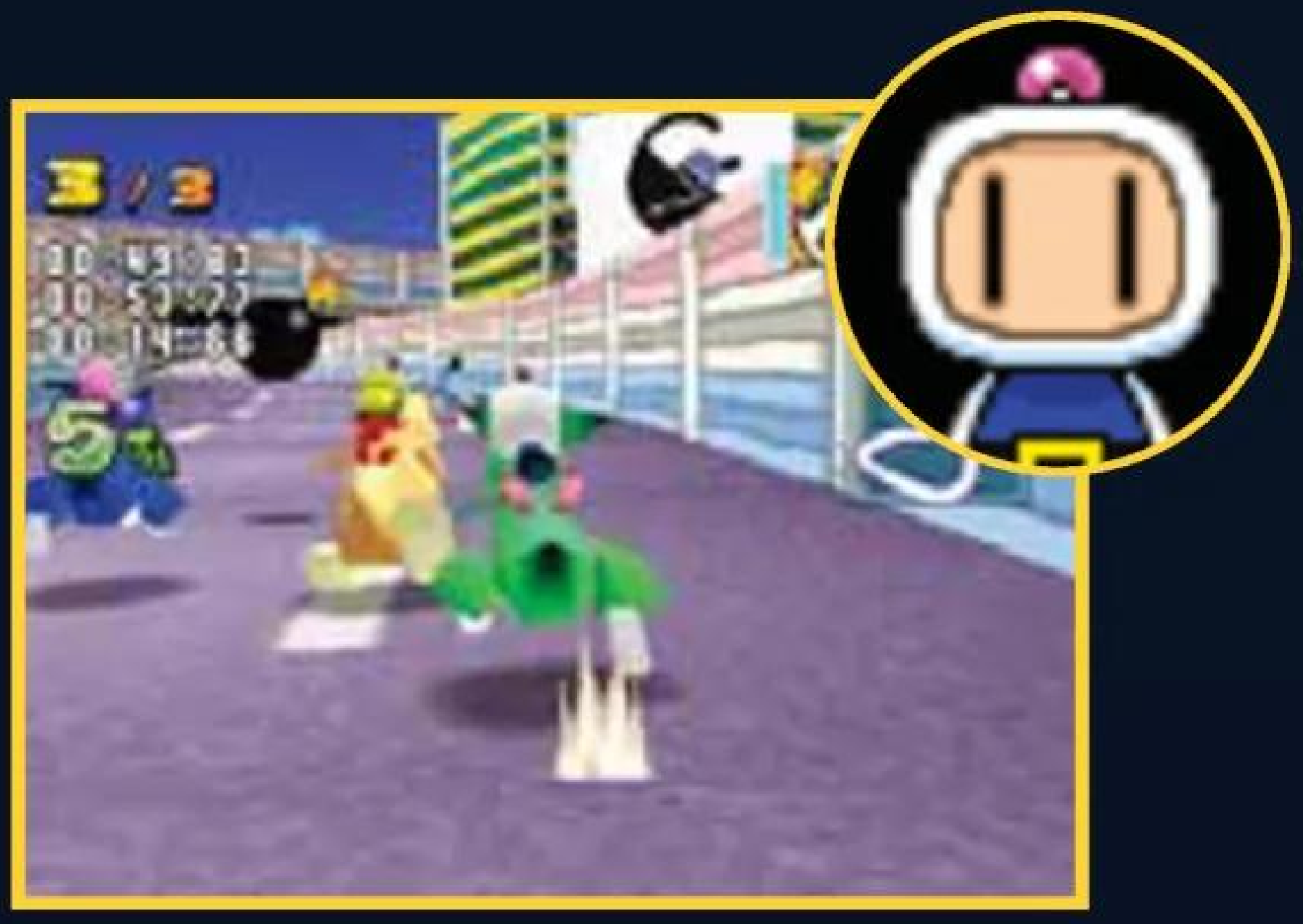
Cleverly adapting the main series' mechanic of claiming your opponent's abilities, *Battle & Chase* rewards victories with the chance to strip defeated racers' vehicles of their parts. Aside from Mega Man, various series regulars are playable, with power-ups being obtained by running over various obstacles.



BOMBERMAN FANTASY RACE

■ SYSTEM: PlayStation ■ YEAR: 1998

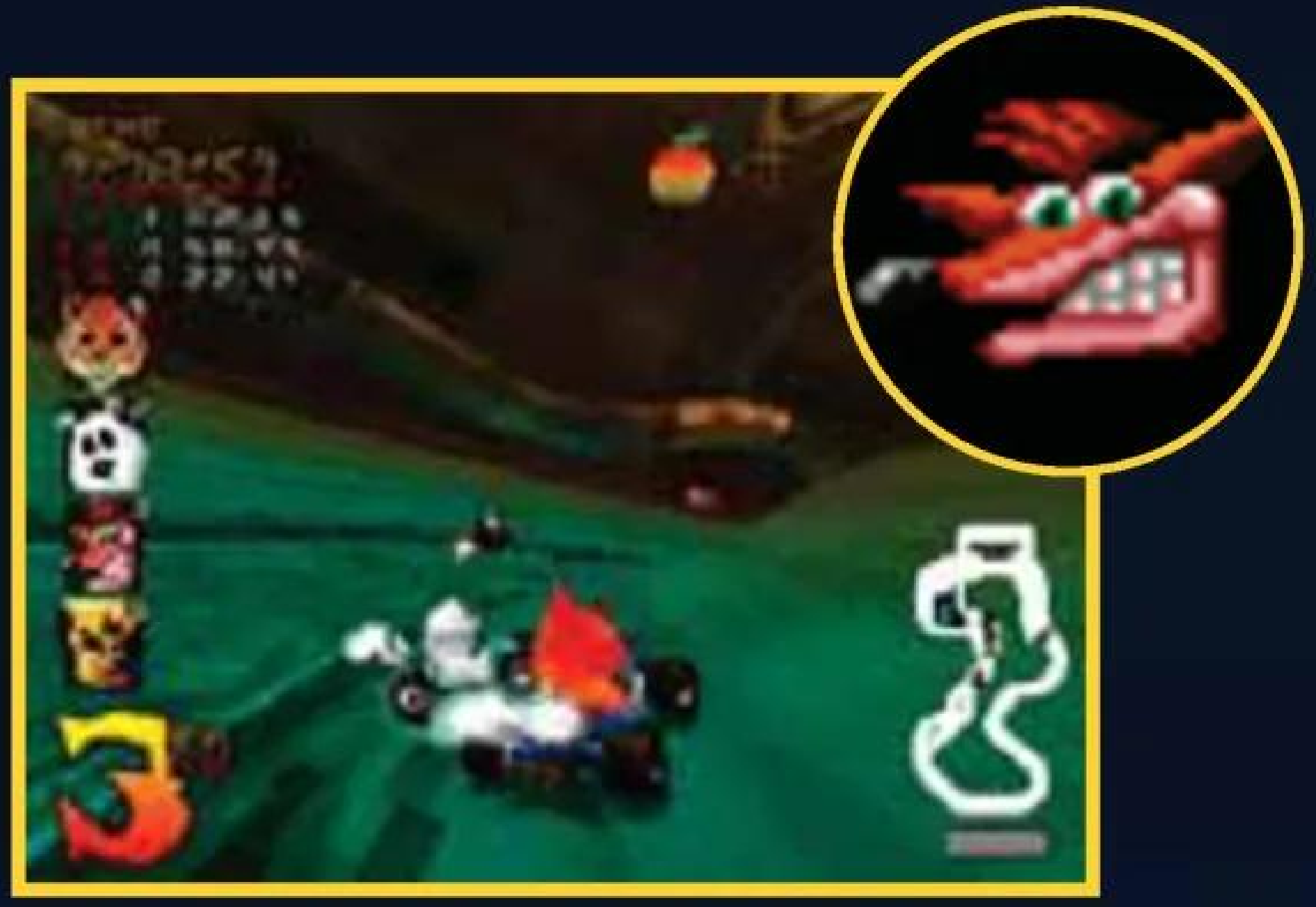
Given that *Bomberman* is maze-based, it's unsurprising that *Fantasy Race* ditches the franchise's mechanics in favour of conventional racing gameplay. Bomberman still attacks his foes with bombs, but while racing on Louies and Tirras, which can be traded for other mounts using race winnings.



CRASH TEAM RACING

■ SYSTEM: PlayStation ■ YEAR: 1999

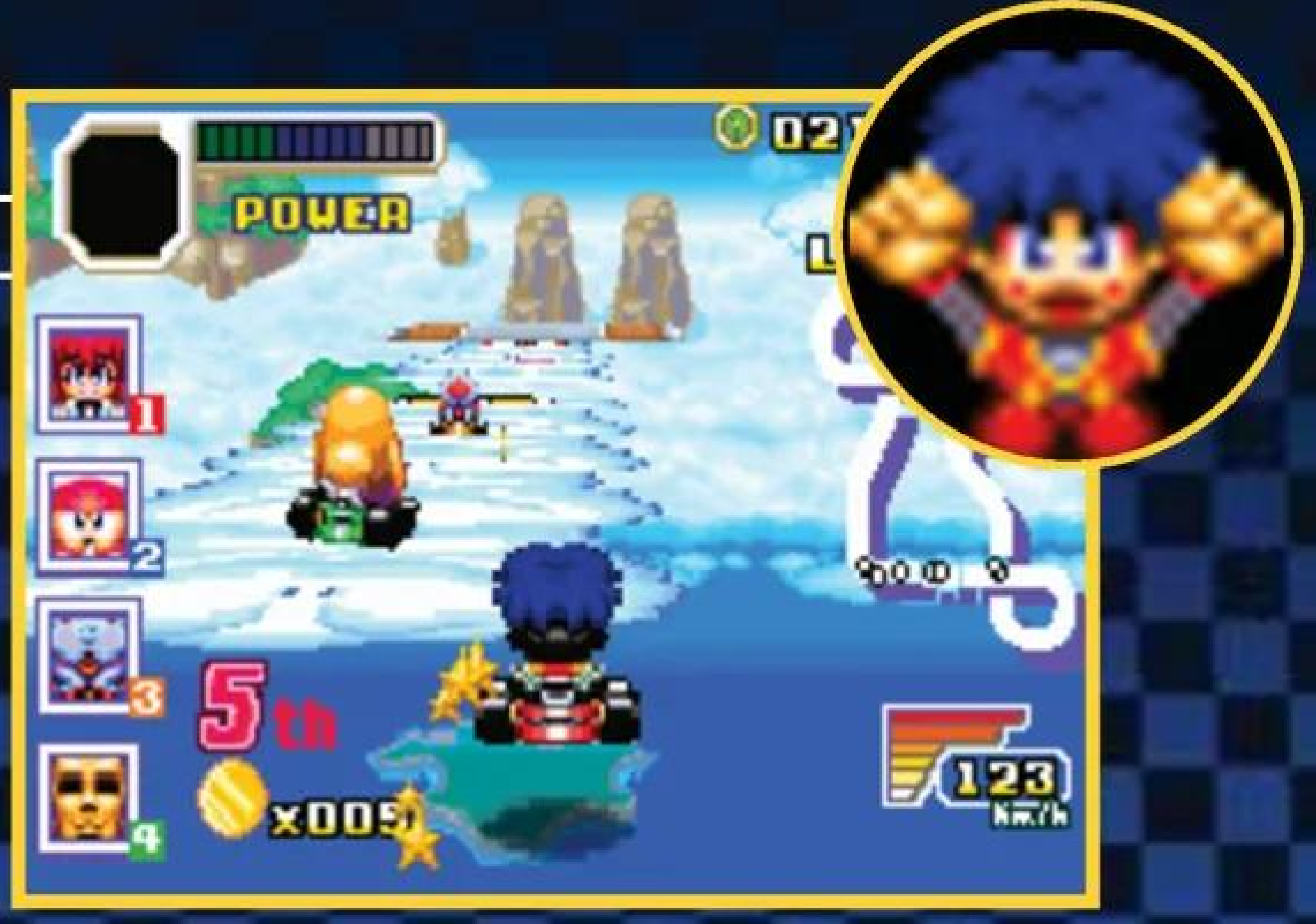
Clearly influenced by *Diddy Kong Racing*, Naughty Dog put its own spin on Rare's established formula to ensure their final *Crash Bandicoot* title stood apart from its more wholesome muse. Imaginative power-ups, kinetic gameplay and sumptuous visuals mark *Crash Team Racing* out as a must-play racer.



KONAMI KRAZY RACERS

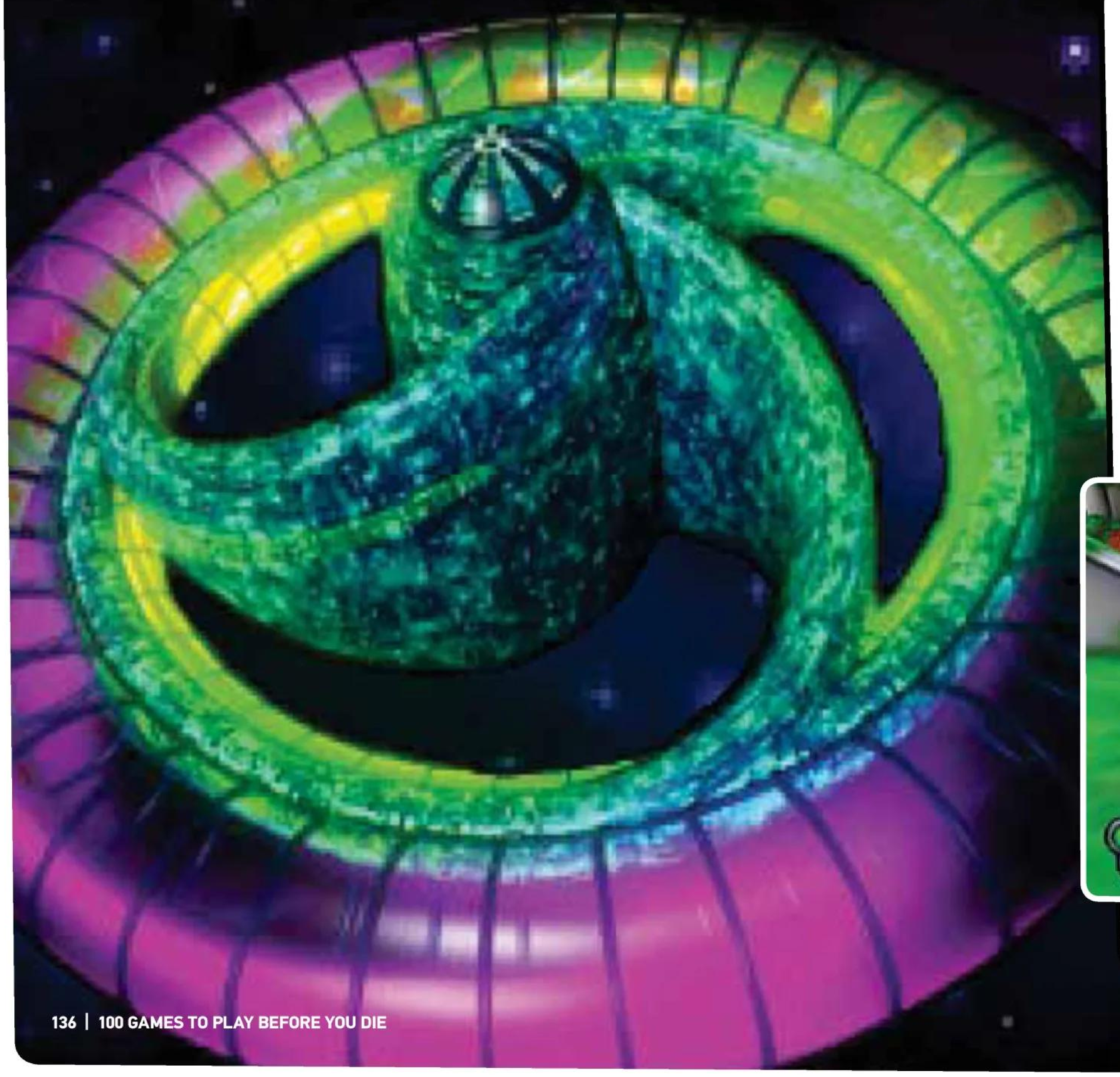
■ SYSTEM: GBA ■ YEAR: 2001

A spiritual successor to *Super Mario Kart* of sorts, Konami's game uses a Mode 7-type technique to render its tracks. *Krazy Racers* features not one but a dozen franchise favourites from Konami such as Gray Fox, Vic Viper and Dracula. The title delivers short but sweet courses and well-balanced weapons and power-ups.

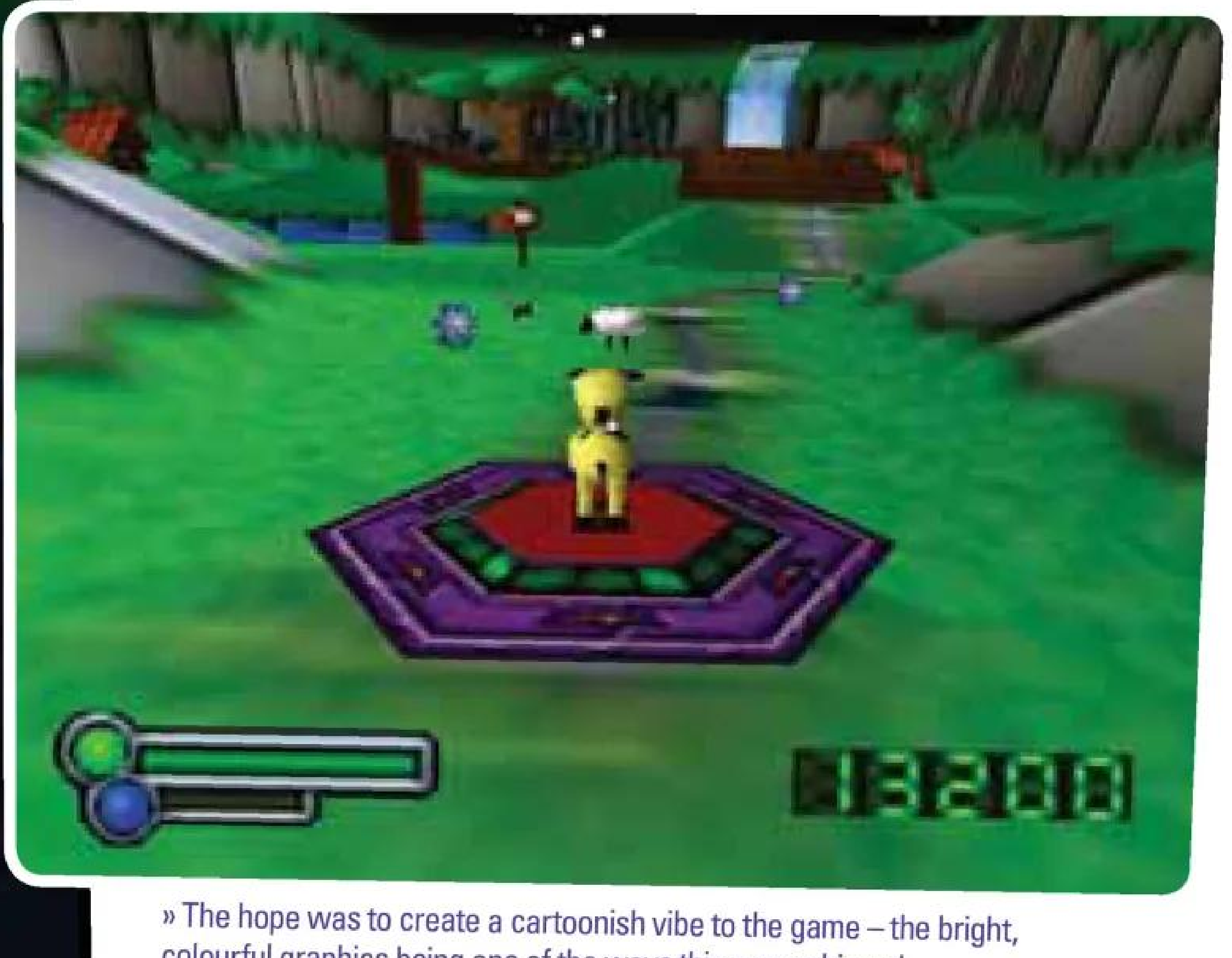


THE MAKING OF SPACESTATION SILICON VALLEY

At a time when gaming was innovating at every turn, DMA Design was looking to push the envelope in any way it could. A lengthy development in a creative environment, however, gave birth to one of the N64's quirkiest releases



One of the most rewarding aspects of the work we do here at Retro Gamer is how speaking with key developers on beloved titles can capture a tangible sensation of particular moments in time. DMA Design is fondly remembered as the developer behind *Lemmings* and *GTA*, but while these are by no means insignificant feats it's perhaps not the best titles for encapsulating what it was like to develop games at the studio. In speaking with Jamie Bryan, who was head of art at the studio, it's clear that *Space Station Silicon Valley* is *the* game to best understand the creativity, fluidity and experimentation that came with creating games at DMA. "Dave Jones [founder of DMA] had created this environment where a lot of likeminded people had come together, but it was still a diverse crowd."



» The hope was to create a cartoonish vibe to the game – the bright, colourful graphics being one of the ways this was achieved.

» The stages all followed the same cliches we would come to expect in platformers, but the challenges were at least varied.

With *Lemmings* releasing in 1991, the developer was on an upturn. Jamie recalls how it was an era of experimentation across the industry, with the prospect of true 3D gaming on the horizon giving rise to a greater interest in hiring artists like himself as game developers.

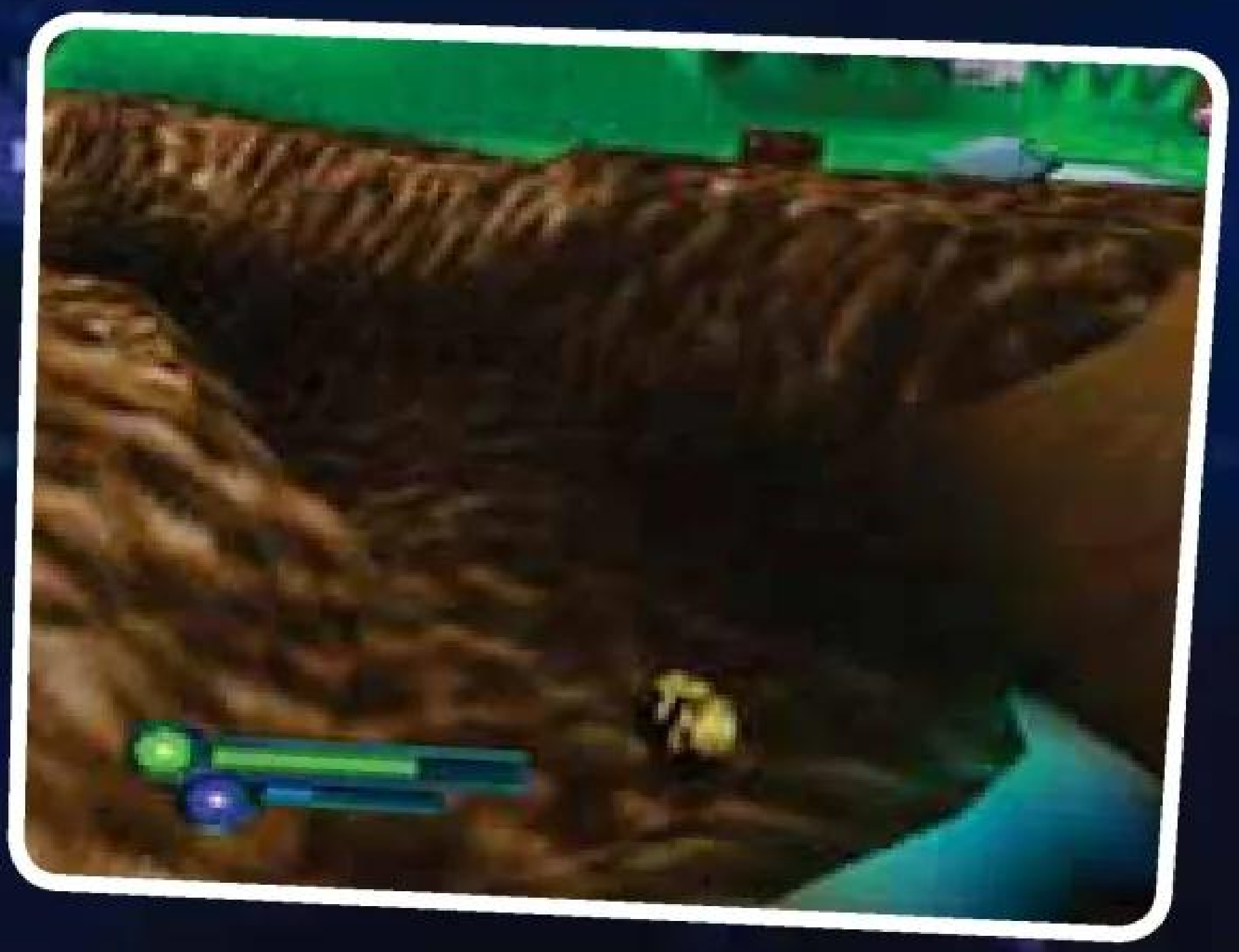
"I'd been sniffing around DMA for some time because I was working in TV and I was actually quite keen on working on games," says Jamie. "I'd been looking at it for the past few years because game graphics had changed quite a lot and there was more need for using artists." He adds that the industry as a whole was at that level because of the upcoming release of the N64 and PlayStation and that DMA, like everyone else, was keen to get in on the ground floor. "DMA went through quite a rapid expansion, almost like an inflation. And with that a whole group of people were thrown together and inside of that teams were formed. I was made project manager and given a team and told to go and make a game on N64."

All that was provided was a short brief. "There was a design team who fed out some ideas," recalls Jamie, "Dave and a couple of guys who fed out one-page, really kind of high-level spec documents. This one was basically: *Silicon Valley*, animals that fight each other, and then there's this progression of becoming bigger and bigger. That was basically it, there wasn't much to it." The idea was to create a game that had the player gaining abilities as they progress to become stronger and more powerful, eventually able to take on bigger threats and overcome more challenging problems.

Initially this sense of progression would be done through a customisation system that allowed the playable animal to be equipped with different body parts that added new functions, but that idea evolved. "Me and the core team would sit down, starting with this idea and just sort of building on it," says Jamie, "so it was about answering the question, 'What can we do with these characters?' And a lot of it was just playing with the stuff." This is a large part of what made DMA Design such a creative developer, explains Jamie, who says that not having to stick too stringently to the design docs meant there was much more freedom in design. "We would set a character and we would just play with it. David Osborne, the old head of art, he was a big influence. He was always going on about treating the environment like a playfield and the characters are the toys, and you just play with them and see how they interact with each other." The team wasn't given a set of deadlines or a schedule to stick to, either, which only gave it more reason to experiment. "That was the basis of building out and expanding the characters, to get one character and then stick some wheels on it, see how it flies, see how it bounces, see how it jumps… ▶

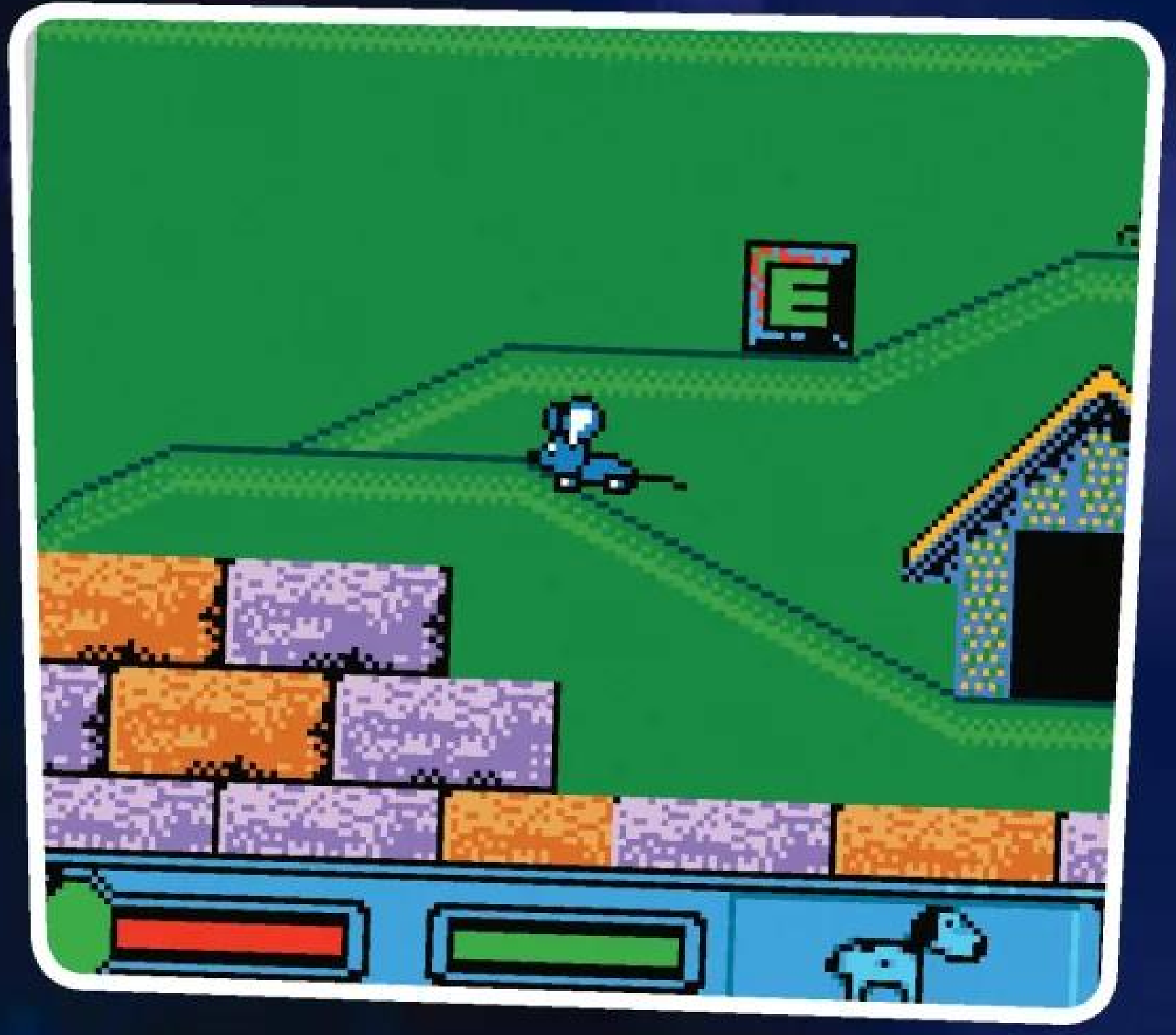
CONVERSION CAPERS

Despite being developed for N64, Silicon Valley popped up elsewhere



PLAYSTATION

■ Rightly considered to be one of the laziest ports of all time, DMA's input amounted to nothing more than handing over the art and code and leaving Runecraft to do the rest. Called *Evo's Space Adventures* on PlayStation – perhaps to purposefully distance the considerably better N64 version from this abomination – it had arguably the worst framerate on PlayStation, bad audio and the bright, colourful graphics of the DMA version were replaced with a dark and miserable look.



GAME BOY COLOR

■ While not nearly as horrific as the PlayStation port, the concept of the game proved to be a challenge to bring over to the Game Boy Color's 2D perspective. Tarantula Studios did a great job of porting the levels in so much as they retained the important visual touchstones and gameplay mechanics of each stage almost like-for-like, but sadly the limitations of the hardware just weren't able to match the grand idea of its Nintendo 64 sibling.

WARM BODIES

The most useful animals to control

RACING DOG

■ Combining speed and long-range firepower are two things that remain effective throughout the game, so this rocket-firing turbo dog is certainly an improvement on man's best friend. It's one of the first 'enhanced' animals you'll encounter in the game, and blasting around at speed pelting enemies with rockets is a fun way of introducing the game.

HELI- RABBIT

■ Sure, you could go toe-to-toe with rocket wielding animals, but why bother when you can just drop them from above. For a game about moving around 3D space, the heli-rabbit feels a little like cheating, but when you're able to obliterate enemies from above with minimal ease that's not such a concern.

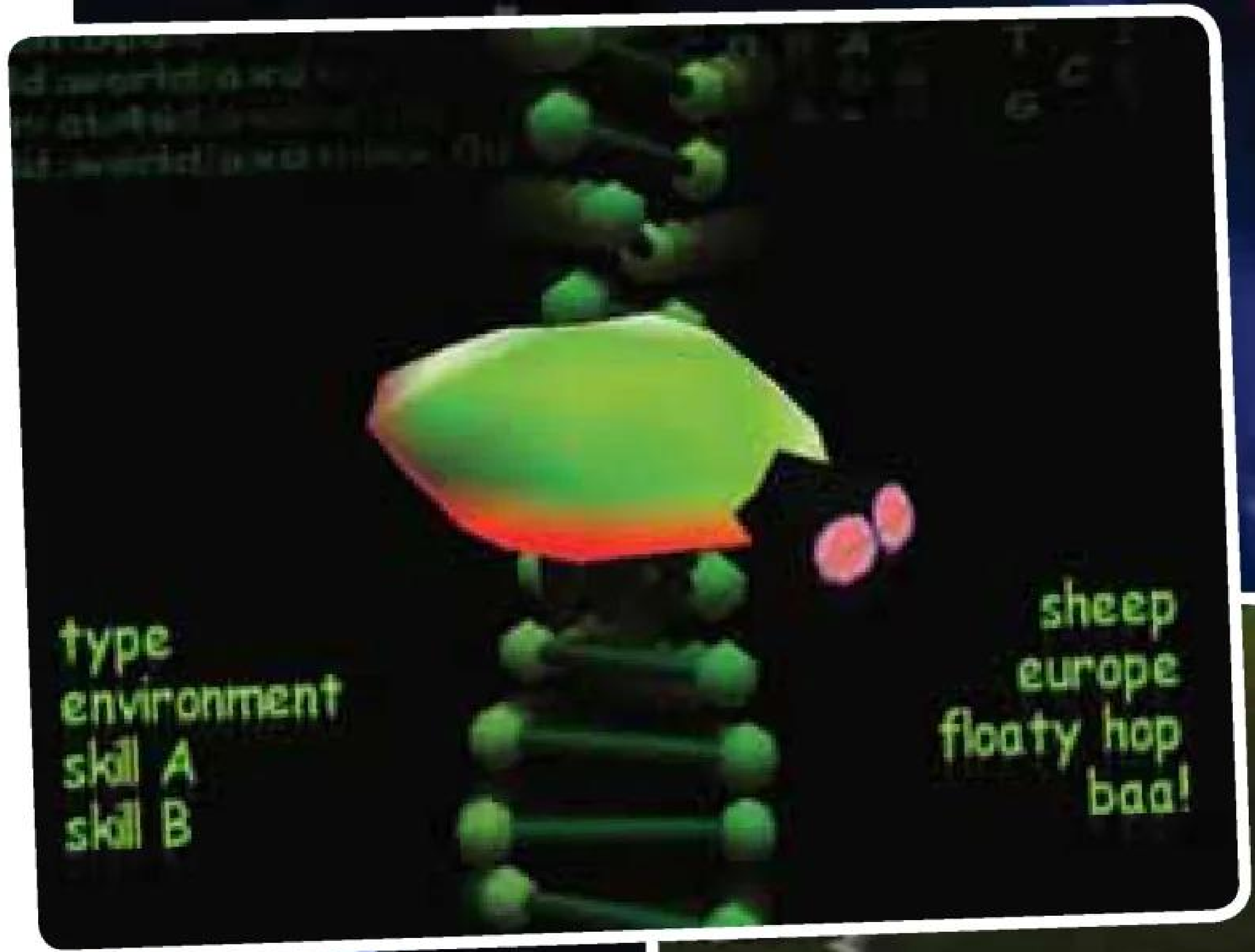
SKI HUSKY

■ There was something badass about this animal, a wolf-like dog wearing skis, capable of firing rockets and propelled either by a mystical force or its own combustion system (don't ask). He might not have had the cool shades of the walrus or the strength of the polar bear, but there was something about this fella that just made him a riot to play as.

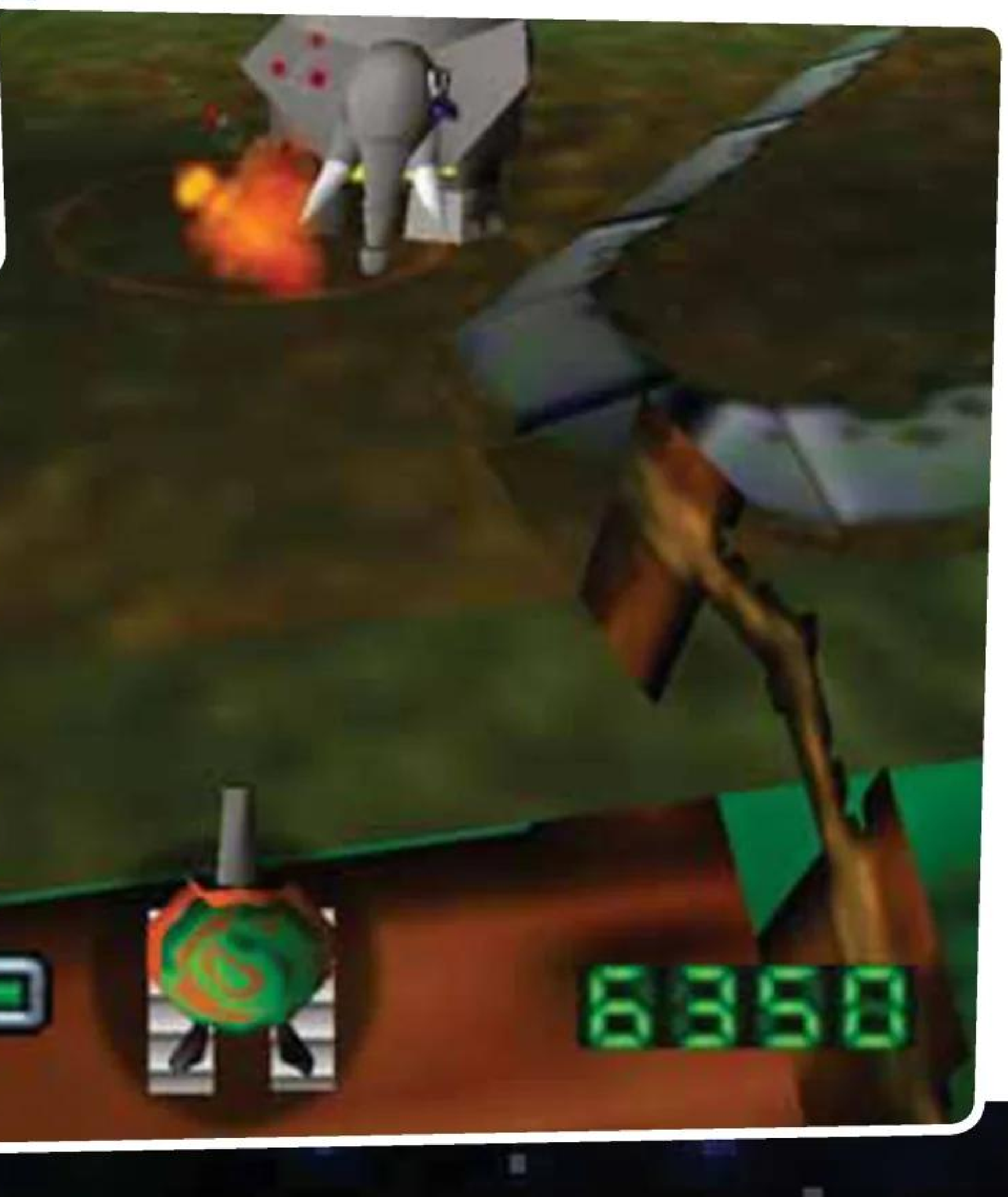
KING PENGUIN

■ Any time a jetpack is added to a game, we're happy. The king penguin – a fun play on the emperor penguin – is essentially the jetpack of Silicon Valley, while his jaunty crown makes sure everyone knows of this royal's wild side. The fact that he can also issue commands to an army of snowball-hurling penguins makes him all the more brilliant.

> "IT WAS ALL QUITE DEMOCRATIC, WITHOUT SOUNDING LIKE A HIPPY COMMUNE'
>
> Jamie Bryan



» Each new animal was presented with a sort of DNA scanner, a novel and fun way of introducing abilities.



» Note from the author: I just couldn't get passed these two elephants when I first played the game all those years ago.

▶ all that kind of stuff. There was a core set of abilities that we were able to expand right through all of the characters, and we did get a bit carried away with an absence of any schedule so we just started just filling out all these different ideas, all these different parts."

While Jamie was the project manager, there was no real distinction when it came to the design. The iterative nature of development at DMA meant that ideas came from everyone, even those not directly involved with the project. "What we'd do is involve the whole team and just get people to fire in some ideas," explains Jamie, "and then I would collate all the stuff together with my own ideas and then we'd just kind of mash them all together to see what we came up with. It was all quite democratic, without sounding like a hippy commune. The main thing was because it was a love of games, and people just wanted to work on the design process and to feel like their ideas are listened to."

This approach ultimately lead to *Silicon Valley*'s clear sense of humour. As a result of this direction, a cartoony, comical style was adopted. "That's my natural style anyway," says Jamie, "so I just kind of worked with that. And because we wanted to make it quite a funny game, it just seemed right to keep it comic-looking."

Jamie adds that because it was being developed for N64, *Silicon Valley* was "subconsciously" inspired by the likes of Nintendo's own products. "We were making some kind of Nintendo game on acid. It was like some kind of alternative Nintendo universe." But as it happens, the game wasn't intended to release on N64. Planned as part of a three-game deal with BMG Interactive, *Silicon Valley* and its stablemates *Grand Theft Auto* and *Tanktics* were due to be developed for PC, PlayStation and Saturn. However, with Nintendo pumping a lot of money into *Body Harvest* and even a potential buyout on the cards, the game was instead directed onto N64. "*Silicon Valley* wasn't under the same amount of scrutiny as the *Body Harvest* guys," says Jamie. "Miyamoto and his team were over and there was quite a lot of pressure on those guys to really create something, and it was a really small team as well."

Interestingly, this decision resulted in a certain degree of envy directed at the *Silicon Valley* team: it was relatively hidden from the attention of Nintendo, amd DMA Design had given it free reign, and the N64 itself was the console to develop for at the time. "When I first started the N64 was just like this amazing, wonderful console that could do everything," says Jamie. "So this was kind of cutting edge tech and it was such a joy to be on it, everyone wanted to be on N64." As a result, those DMA developers still stuck working on PC – even the *GTA* team – were looking to Jamie and his team with a little jealousy. "No one was that keen on being on *GTA* in the early days," says Jamie, "because it was seen as the poor man's project, with old technology." Jamie adds that, somewhat ironically, *Grand Theft Auto* had "seemed like the lesser project" at the time because of how dated it looked.

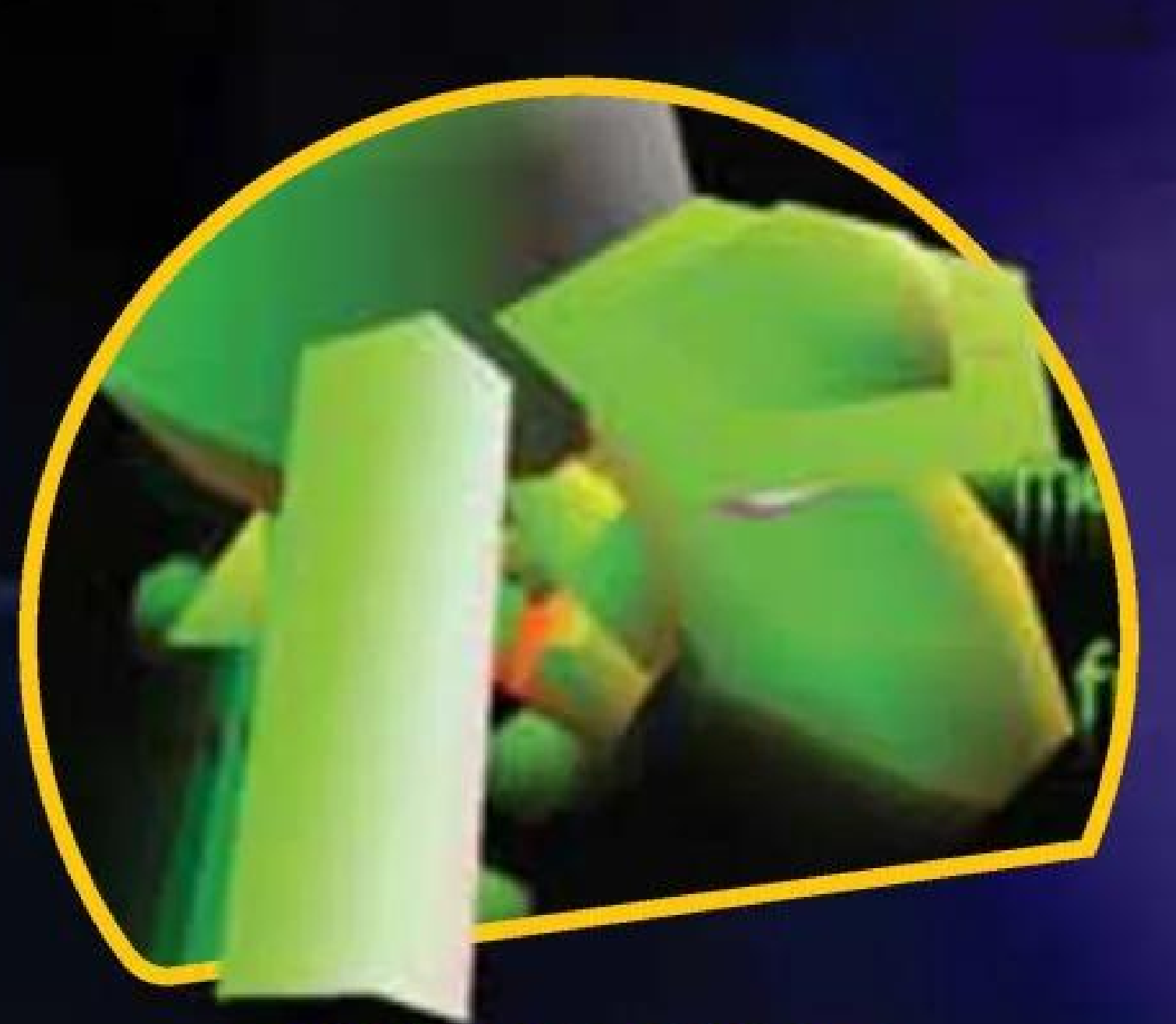
Silicon Valley rattled on for quite some time after the release of *GTA* in 1997. The two began development in 1995 but *Silicon Valley* would finally release in October 1998. A gestation period for refining the mechanics had ultimately drawn the title out, an unavoidable drawback of the freeform development process that DMA Design preferred to adopt. "I kind of liked that nobody really understood what they were doing," admits Jamie, "but that was the beauty of it, because

TORTOISE TANK

■ Perhaps the animal that looks the least like an animal in this game, the tortoise tank has an added advantage over the likes of the polar bear – whose turd landmines are, admittedly, kinda funny to use – in that it can hunker down underneath that shell at any time to avoid damage, popping out to fire off a cannonball or two.

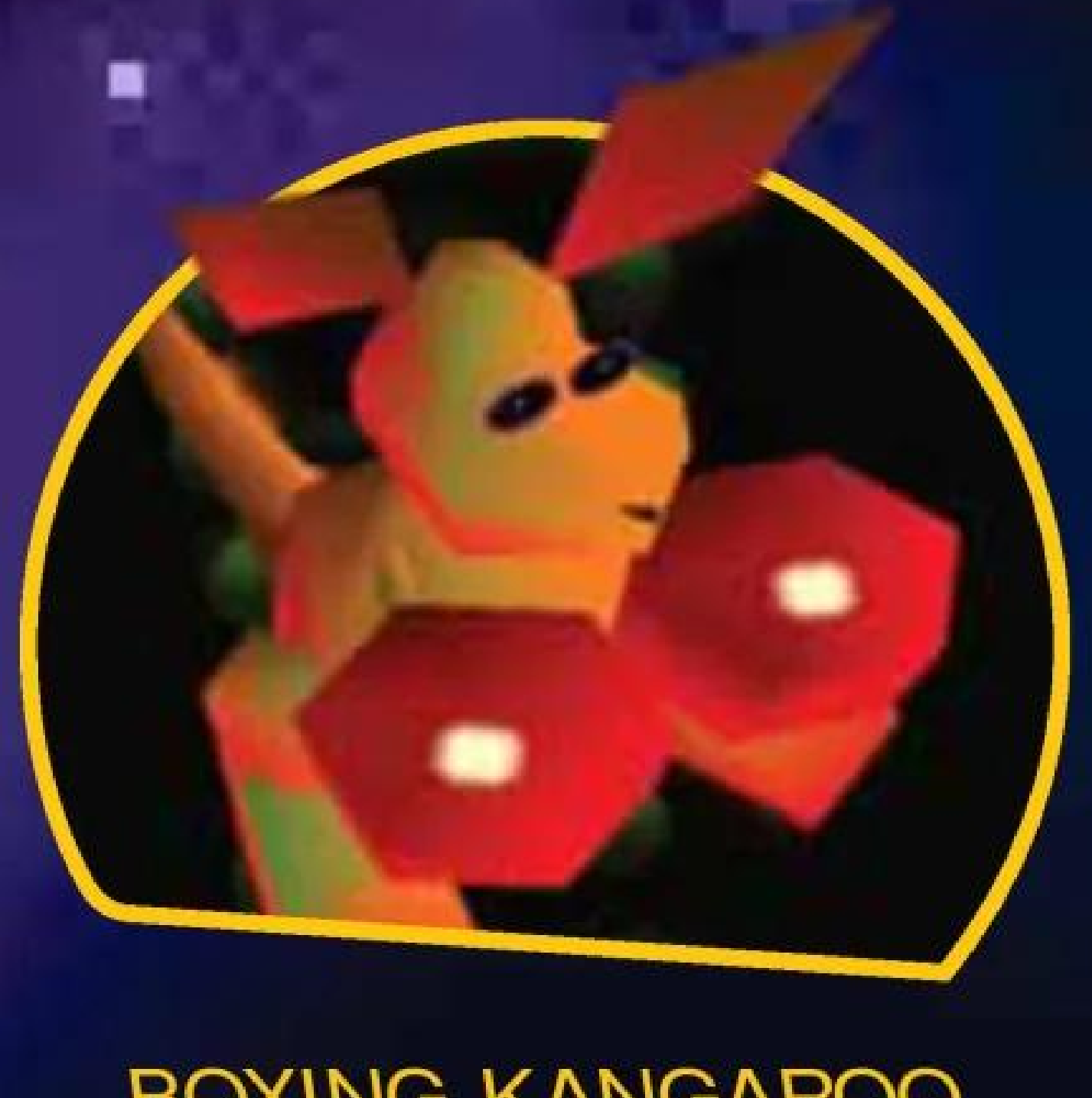
LION

■ The king of the jungle doesn't need gadgetry to reign supreme, especially considering he has a roar so powerful that it knocks him back a little. The lion is only playable on a single level, which kind of makes the animal more special in a way – especially when there's so many other jungle creatures to defeat.



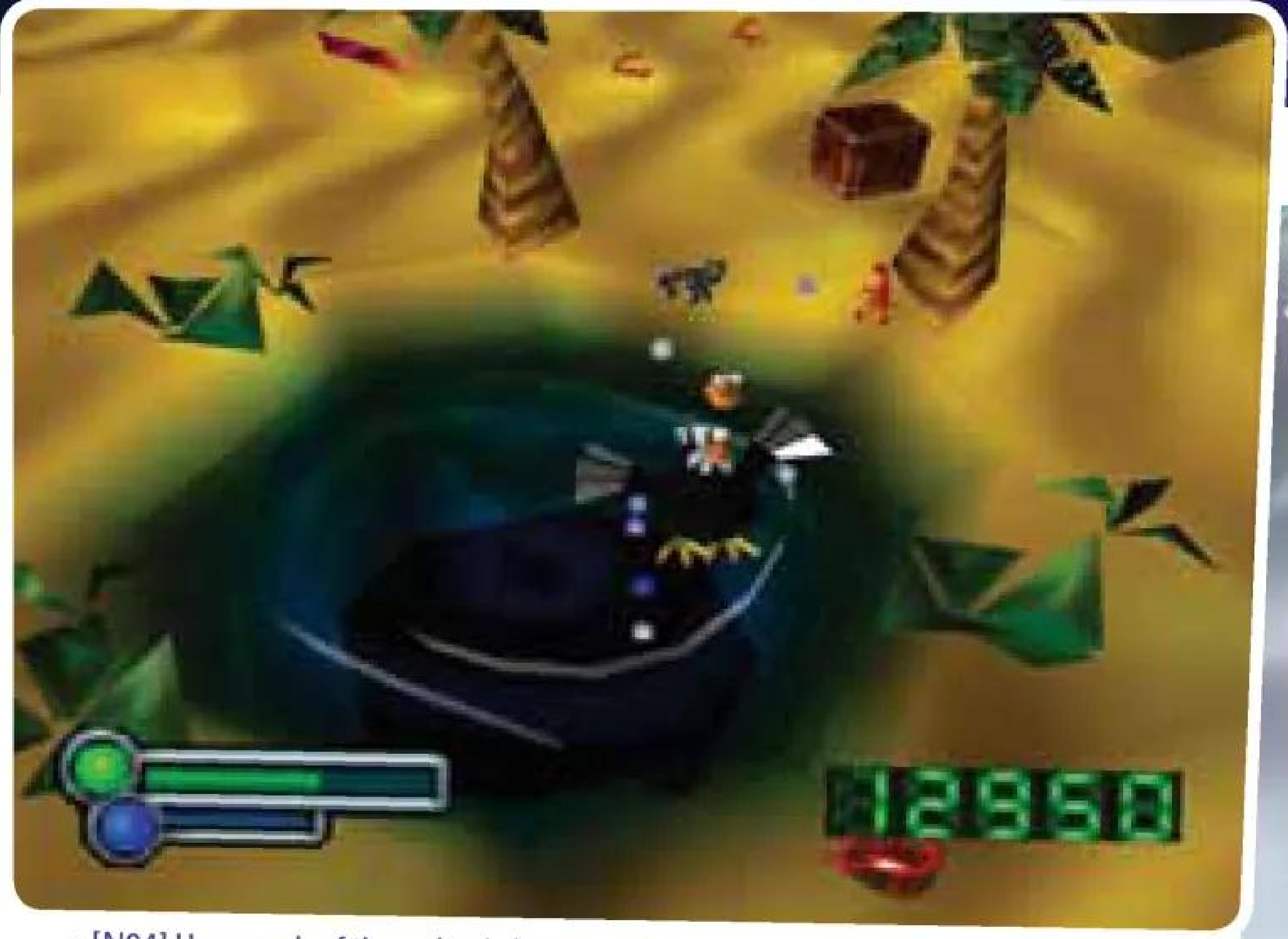
CANNON CAMEL

■ It's a boonie-wearing camel with a turret on its back, what more do you want? Well, as it happens this animal can also warp rather than jump. But that cannon is actually one of the best in the game, and when combined with first-person view can be used to pick troublesome enemies off at a distance.

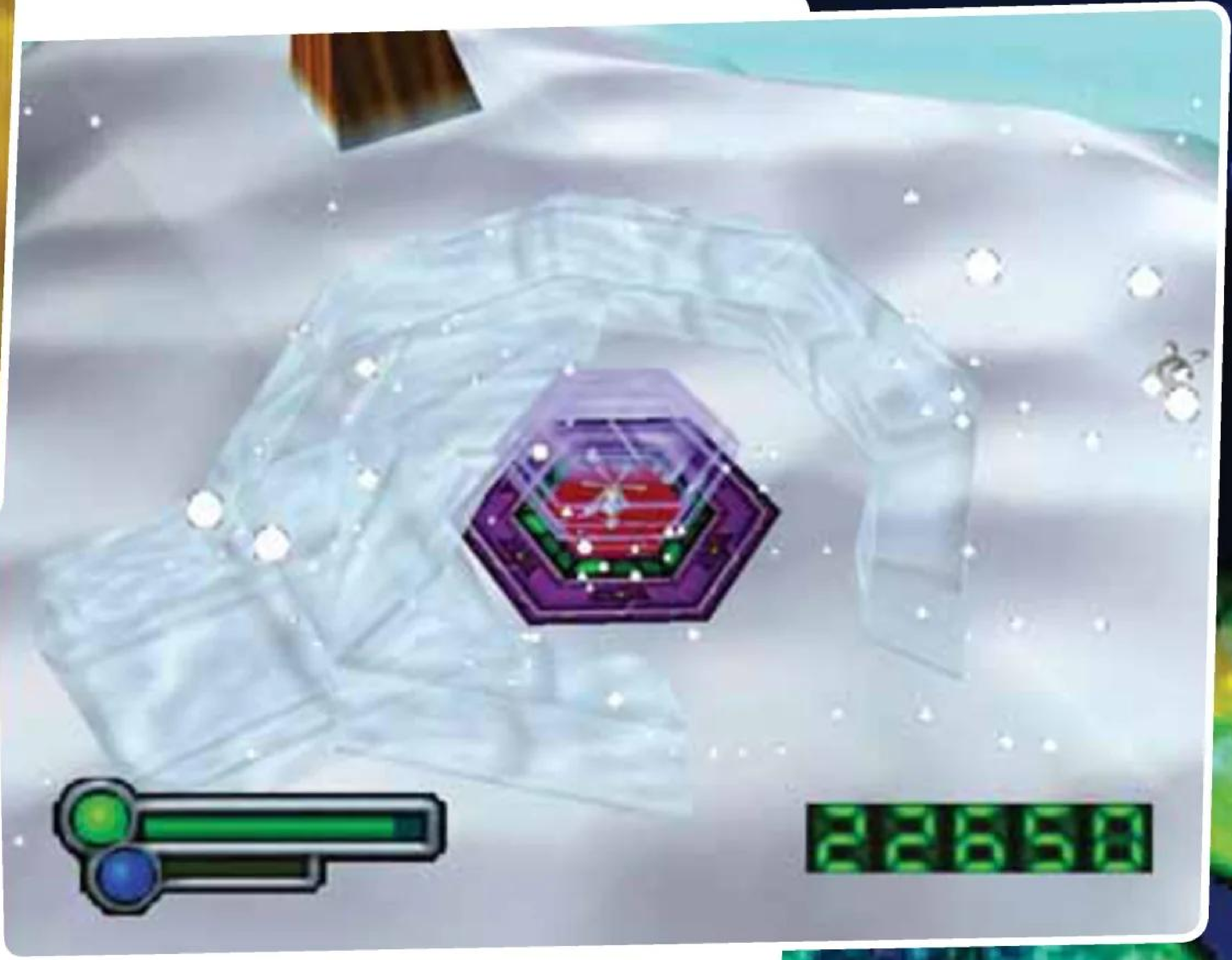


BOXING KANGAROO

■ It might be a fairly contrived use of the kangaroo, but there's something about the way this hopping, boxing marsupial plays that just makes him a delight to use. The fact that his springing jump and large size can get him over most walls is particularly empowering, changing the dynamic of any stage where you begin as one of the little'uns.



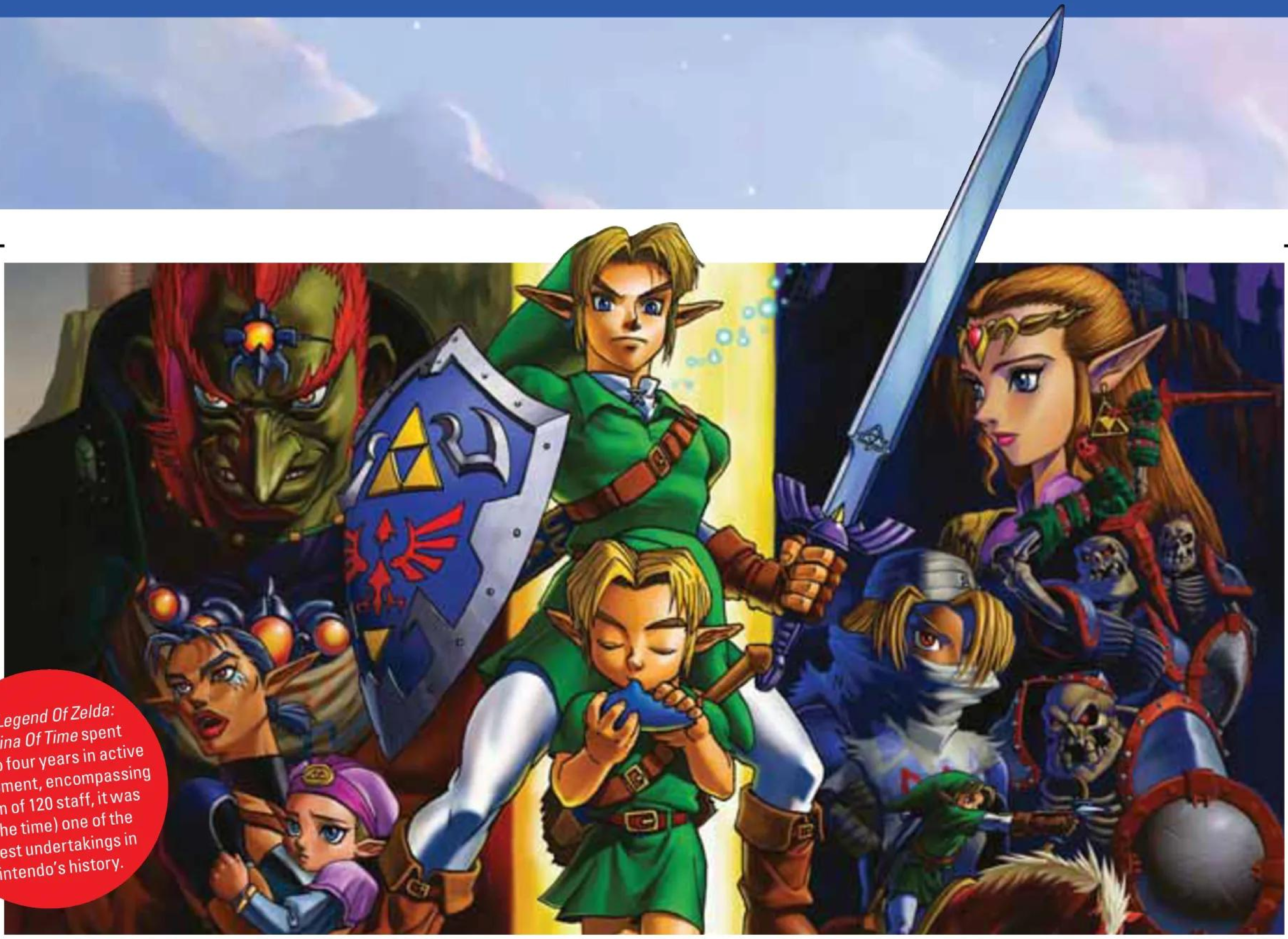
» [N64] How each of the animals interacted with one another was part of the learning experience and added greater depth to the mechanics.



» You could only leave the stage once the main objectives had been completed, at which point you had to find and access the teleporter.

it was the time for experimentation. Even down to the control configurations: we came up with some really weird control configurations – like 'why don't we use two controls to control a leg each?', things like that. Your hands were kind of crying in pain by the end of it because you were just mapping buttons anywhere you thought they might work."

All this experimentation and iteration resulted in a game that was compelling to anyone who played it. "Quite a lot of artists and programmers would just come over to see it," recalls Jamie. "I mean, compared to the other games, we were doing quite well. There were a lot of other teams who were really struggling and weren't producing anything close to a finished game." But nor were there any expectations placed on Silicon Valley, either; while GTA had now released and become a proven success, the PlayStation had also taken over as the console to develop for and the potential Nintendo buyout had collapsed, ultimately leaving *Silicon Valley* as just "this thing that was being developed". Things weren't helped much with DMA's sale to Gremlin Interactive, a necessity since the developer was running out of money – likely due to the extended and uncontrolled development times and the rapid expansion to gear up for the new consoles. This would be "the death of DMA", as Jamie puts it, since the creative and inspiring environment would immediately give way to stricter control, the hiring of producers and an insistence on working overtime that naturally didn't sit right with this community of passionate creatives. The atmosphere of the company changed dramatically almost overnight resulting in some rather unpleasant changes that left a sense of resentment in much of the workforce, from the sudden appearance of a large picture of the owner being put up in the entrance, or the operations manager who brazenly admitted that he "doesn't care about games" in his first meeting. "It was kind of clear right from the start that it was more about money," recalls Jamie, "and this was different to the DMA way of thinking where the games came first and enjoying the things you make." Jamie left the company just before the release of *Space Station Silicon Valley,* unwilling to endure the corporate face of Gremlin, and it wasn't long before the rest of the team did the same. Though the game was released to great praise, no one could've have predicted that it was the last true example of what could be created from DMA's unrestricted attitude towards creative development. ✱



The Legend Of Zelda: Ocarina Of Time spent close to four years in active development, encompassing a team of 120 staff, it was (at the time) one of the largest undertakings in Nintendo's history.

GAME CHANGERS

THE LEGEND OF ZELDA: OCARINA OF TIME

RELEASED: 1998 **PUBLISHER:** NINTENDO **DEVELOPER:** NINTENDO EAD **SYSTEM:** N64

Largely considered to be the greatest game of all time and one of the most important releases of the modern era, the hero of time's N64 adventure is a classic that every gamer should play

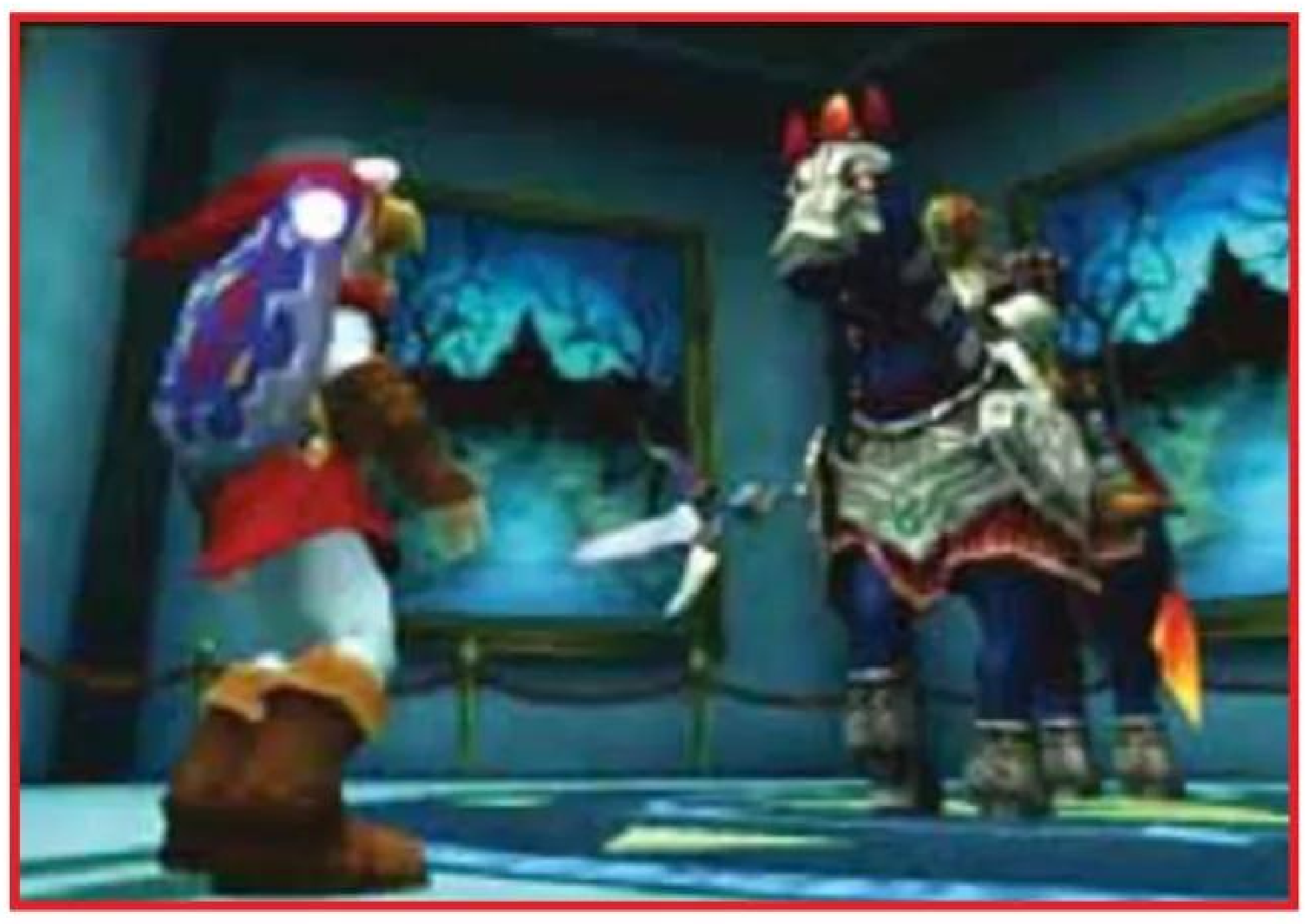
Hey! Listen! When it comes to real industry game changers, they don't come much bigger or influential than *The Legend Of Zelda: Ocarina Of Time*. Developed in tandem with *Super Mario 64*, the hero of time's N64 debut would land two years later (in 1998) but would arguably have a larger impact on the design and direction of 3D adventure games in the years to follow. *Ocarina Of Time* established the template for the genre; it impressed with its bold and intricate dungeon design, engaging narrative and vast, sprawling overworld. In *Ocarina Of Time*, Nintendo didn't just have the technical prowess and creativity to make a fantastic game that would stand the test of time, but the courage and ingenuity to make one that would become truly revolutionary.

Looking back, it is easy enough to draw parallels between *Ocarina Of Time* and other innovative 3D games of the time, questioning the game's resonance through the decades in the process. Argonaut Software's *Croc: Legend of the Gobbos*, Core Design's *Tomb Raider* and, of course, Nintendo's own *Super Mario 64*, being the obvious examples – each arriving some years earlier – but still Link's adventure is so revered to this day, credited with evolving a genre, but why is that?

Perhaps it's because *Ocarina Of Time* had it all. That isn't an overstatement either; we're just giving credit where credit is due. In *Zelda*, Nintendo was able to provide a compelling showcase for the N64 – just as many were ready to call time on the 32-bit era of gaming. It began life as one of the first 3D projects at Nintendo EAD, with every aspect of the game (from its central game mechanics to its evocative world design) arriving as the result of wild experimentation and careful iteration. It's a game born from creativity – in 1994 when development first began there wasn't anything of its scale to compare it with. The result is a technical masterpiece. Many of the actions and mechanics exhibited in *Ocarina Of Time* might be

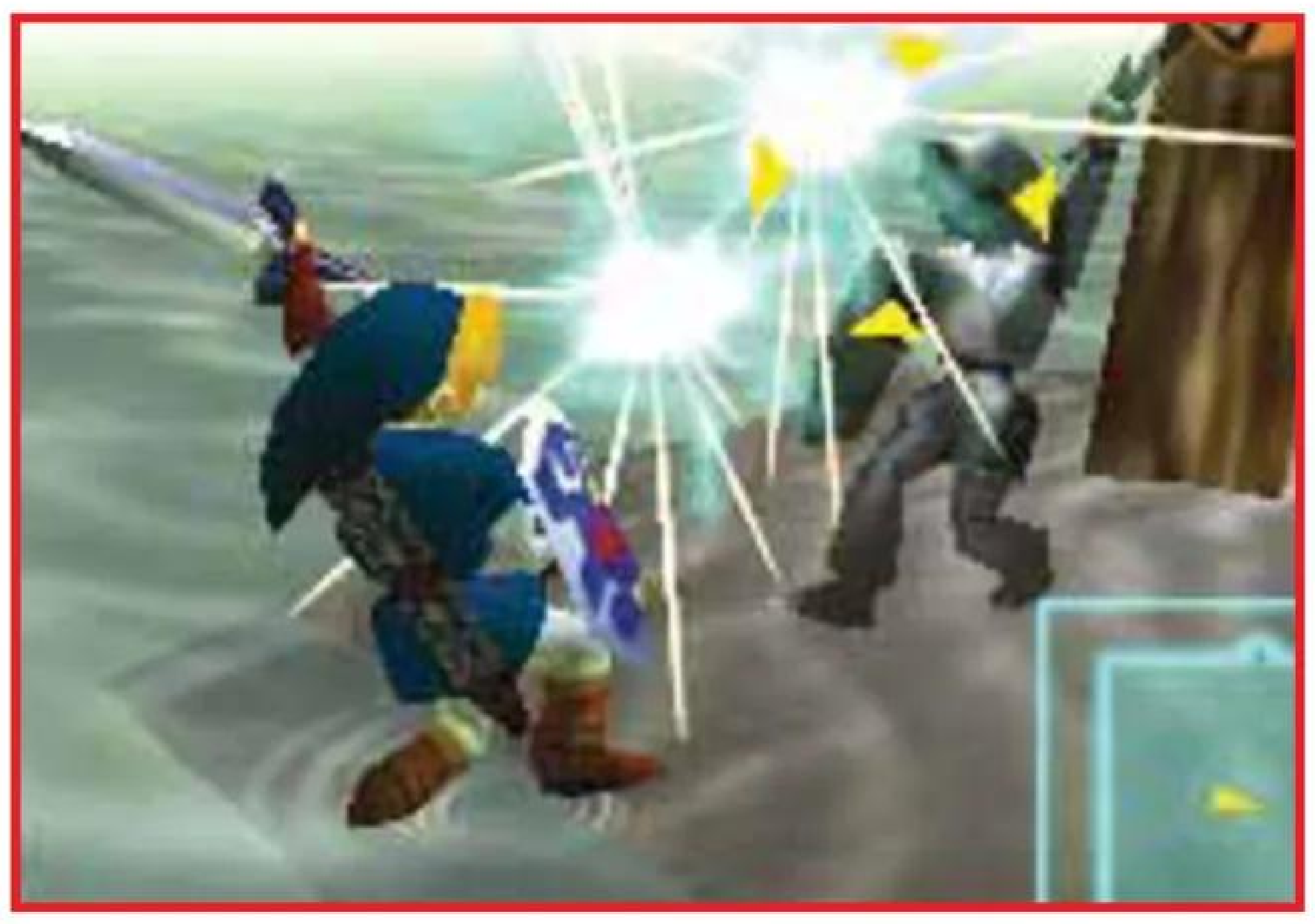
BEST BOSSES

THE COOLEST AND MOST MEMORABLE FIGHTS IN OCARINA OF TIME



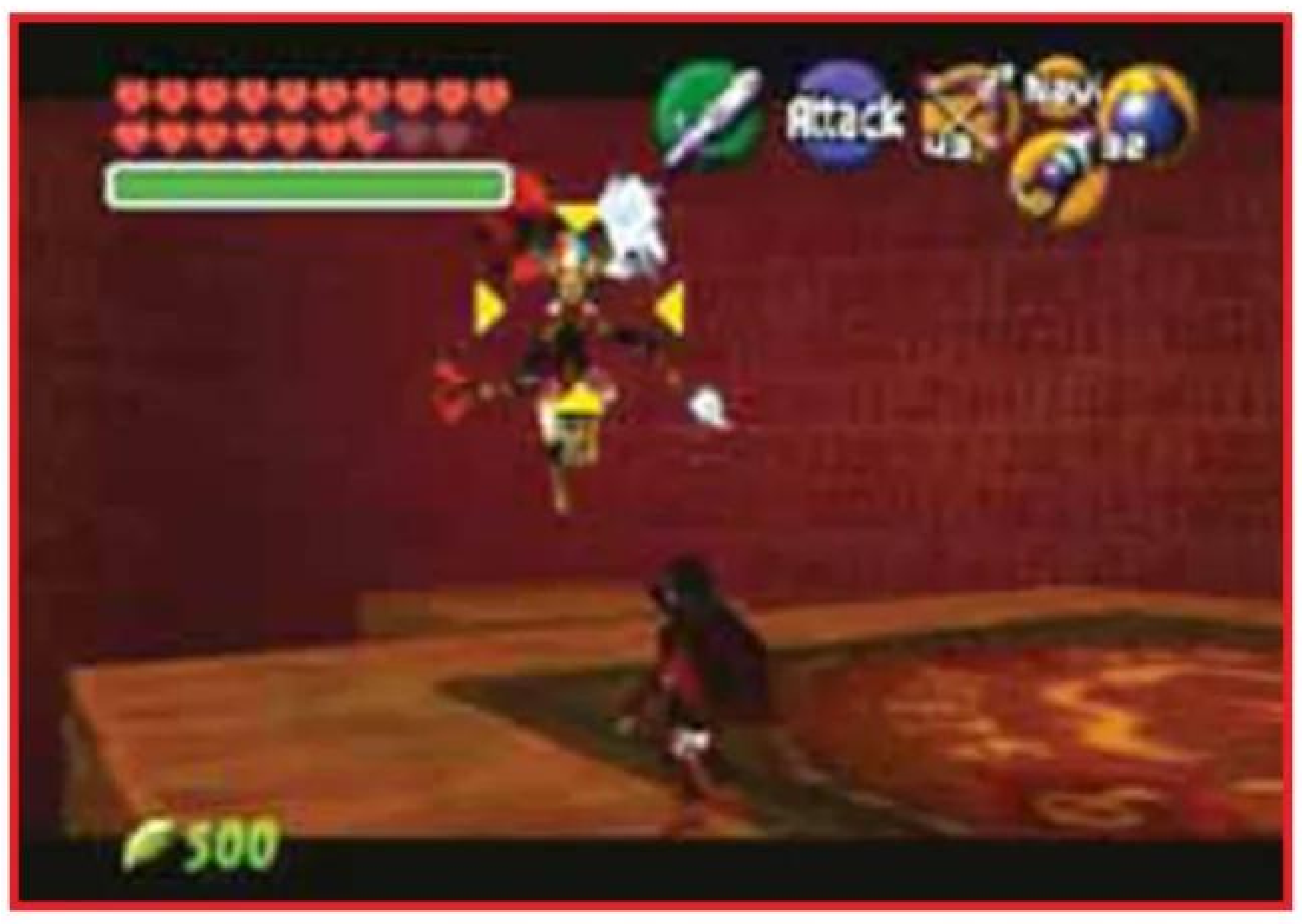
PHANTOM GANON

★ Arriving in a spectacular fashion, just as Link attempts to leave the haunted gallery, Phantom Ganon is a fantastically challenging battle that also gives us a hint as to what could have been had development of the game gone differently.



SHADOW LINK

★ Many players may loathe the Water Temple, but it happened to give us one of the coolest encounters in *The Legend Of Zelda* history. It's full of twists and turns, memorable not because of its challenge but because of its symmetry to your own fighting style.



TWINROVA

★ This boss battle pushes Link to redirect fire and ice blasts back at Kotake and Koume before the Sorceress Sisters team up and attack more ferociously. It forces players to adapt to the rhythm of battle, which is now a staple of boss fights in the *Zelda* franchise.

commonplace now, but that's because their debut here struck such a chord with developers across the globe. While *Super Mario 64* showed a generation how camera control and navigating 3D spaces should and could work successfully, it was *Ocarina Of Time* that showed how gaming had finally evolved to let us truly exist in, and interact, with a living, breathing 3D world.

Context-sensitive actions and the introduction of lock-on Z-Targeting are just two of the staples of the genre that *Ocarina Of Time* introduced: enduring innovations that solved many of the problems that plagued playability in those few 3D action-adventure games released before it. The sprawling vastness of the Hyrule overworld created a sense of unrivalled wonder and place, though it was your interaction within it that made it truly ground-breaking.

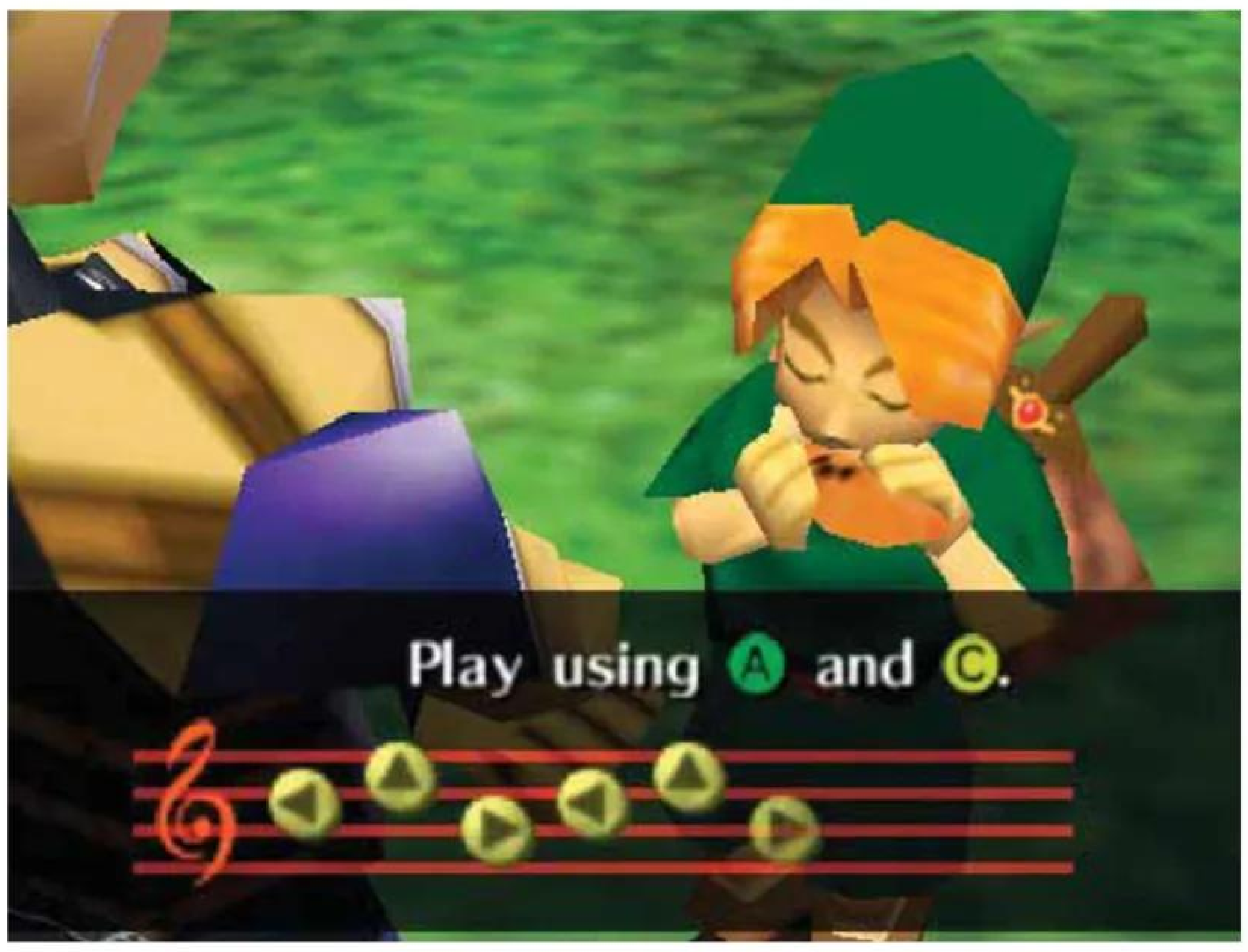
And to think, we almost didn't receive Hyrule as it is now at all. At the time, *Ocarina Of Time* was the largest game Nintendo had ever tried to create, and Shigeru Miyamoto had big concerns over the storage memory capacity of the N64's cartridge. The solution was to engineer a hub area similar to that of *Super Mario 64*'s painting-filled castle, where Link would warp to the various areas and dungeons of Hyrule through portals out of Ganondorf's towering structure – a process of development that ultimately led to the incarnation of the boss battle with Phantom Ganon in the Forest Temple.

Thankfully, Nintendo found a solution to its problems – creating a sparse, realistic game world that cleverly echoed the narrative and invited exploration – and that led to some of the most breathtaking moments of *Ocarina Of Time.* While a lot has been said over the years of the invocative time-travel mechanic Nintendo used – the sheer scope of Hyrule was, well, breathtaking. At the time a world that large, teeming with NPCs and enemies, interconnected pathways, dungeons and hub areas, were an unimaginable feet of technical engineering.

> **"Context-sensitive actions and the introduction of lock-on Z-Targeting are just two of the genre staples that Ocarina Of Time introduced"**

KEY FACTS

- *Ocarina Of Time* development originally began on the Nintendo 64DD, though it was brought to the N64 due to delays to the hardware. An expansion was put into development though ultimately cancelled, appearing as a pre-order bonus bundled with Wind Waker on GameCube.
- *OOT* is where the timeline splits off into three unique variations depending on your actions. Defeat at Ganon's hands leads to *A Link To The Past* in the Hyrule Decline timeline, while success can either spin into a Child or Adult variant featuring *Twilight Princess* or *Wind Waker*, respectively.



» Link's ocarina had a variety of uses, including warping to new areas.

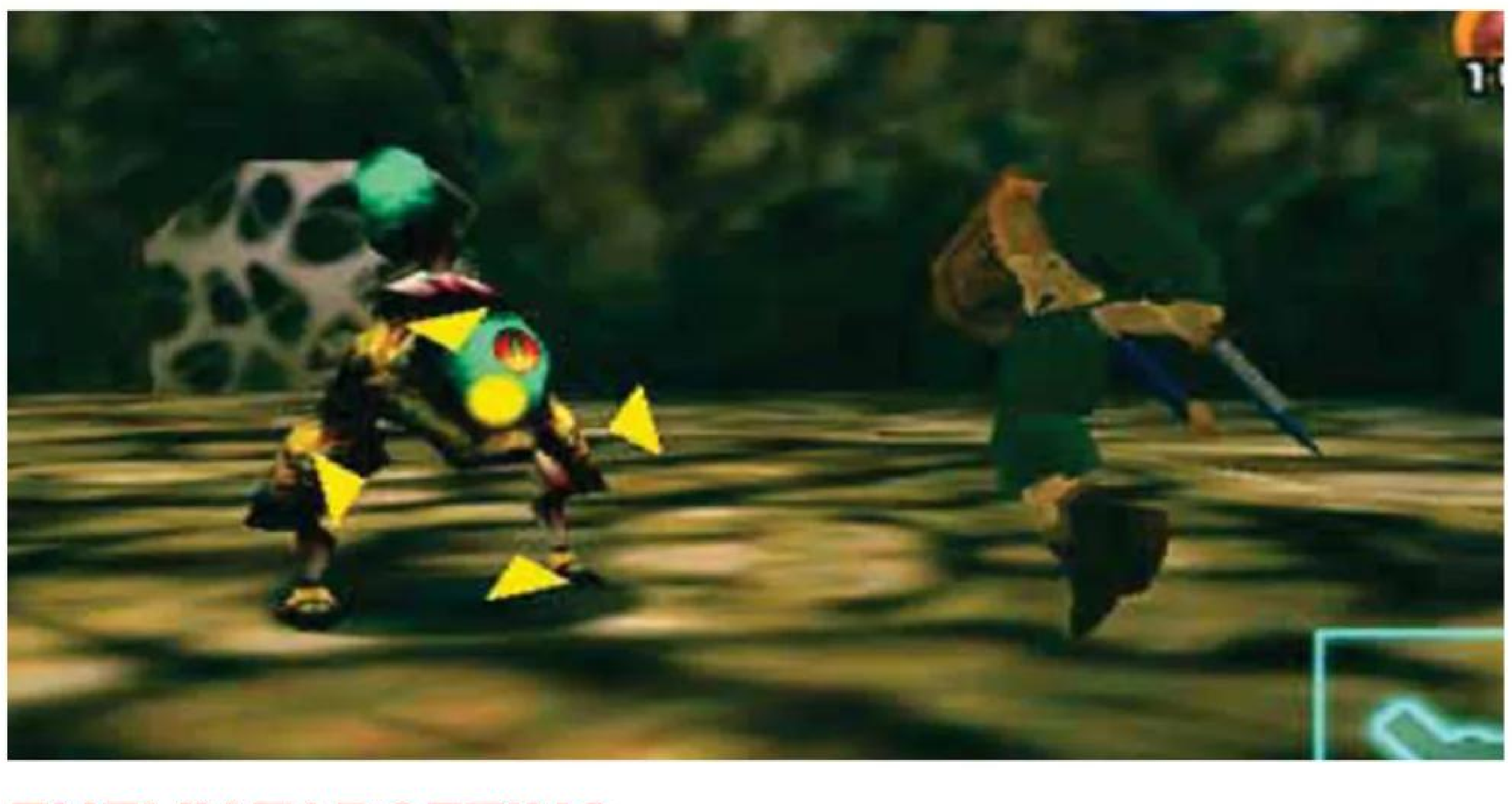
But there it all was, a game world encouraging exploration and experimentation. That combined with a masterful set of dungeon designs that pushed players to explore areas long-forgotten and new corners of the map with a litany of interesting new gadgets and items (many of which reimagined cleverly from older, influential titles in the series). And yet through it all, through so much to see, do and love, Nintendo underpinned the entire experience with a modern tragedy; *Ocarina Of Time* undermined the obvious joy that was to be found in its inherent mastery with a tragic story of cyclical destruction and failure. *Ocarina Of Time* was an adult story, one that would inform a generation of creators to push the boundaries on the type of stories that could be explored in videogames.

Ocarina Of Time changed the face of modern game design. It introduced so many concepts, pushed so many boundaries and rewrote the playbook on so many mechanics and systems that its influence is almost impossible to accurately track. There's a reason *Ocarina Of Time* is largely considered to be the greatest game of all time and that's because there has never been another game like it: beautiful and haunting, joyful and daunting, playing through *Ocarina Of Time* is a defining experience, for game creators and players alike. ✱

GAME CHANGERS

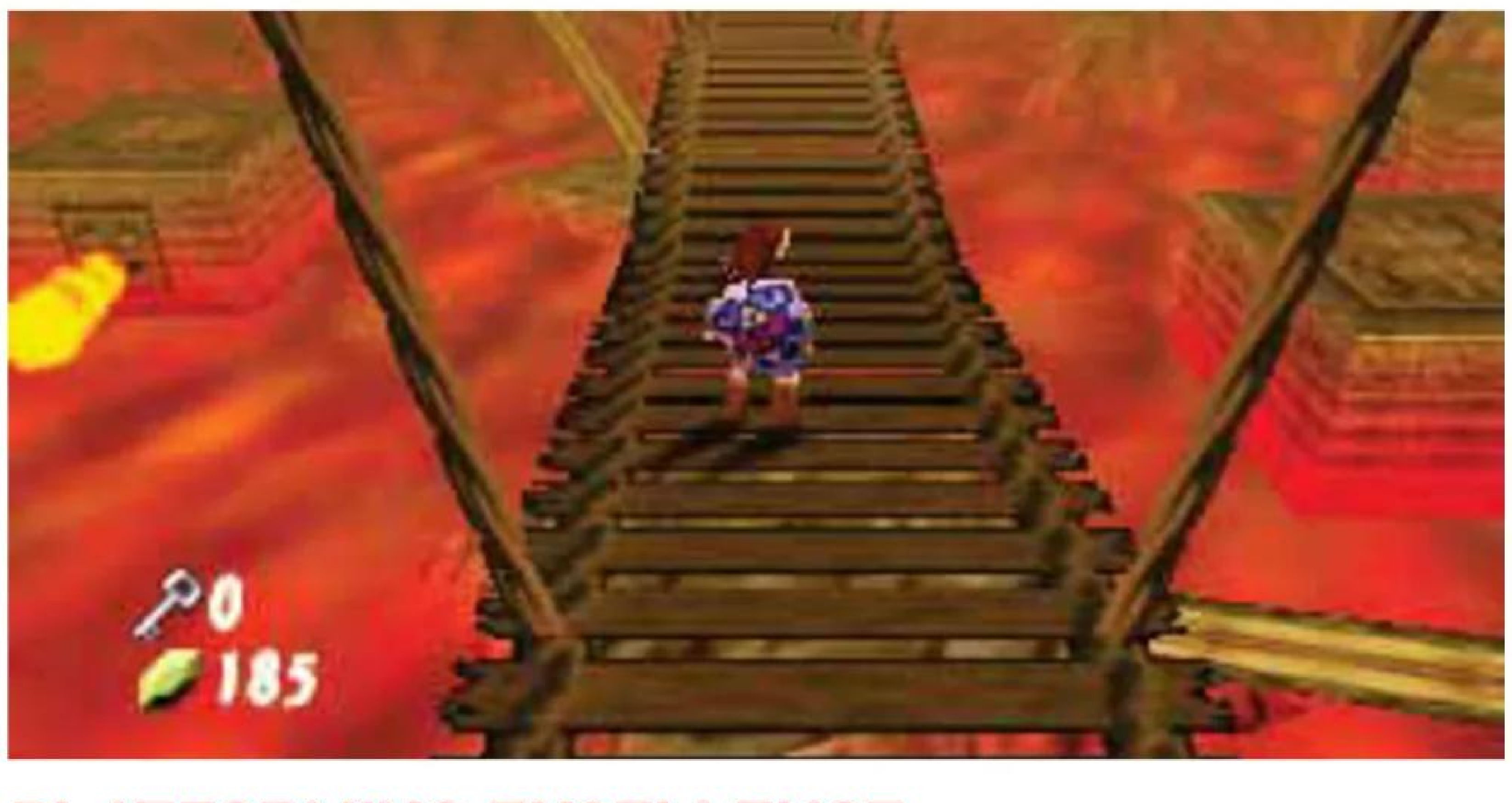
THE FEATURES THAT MADE OCARINA OF TIME LEGENDARY

It wasn't just about being a 3D zelda as these elements helped elevate it to one of the best games of all time



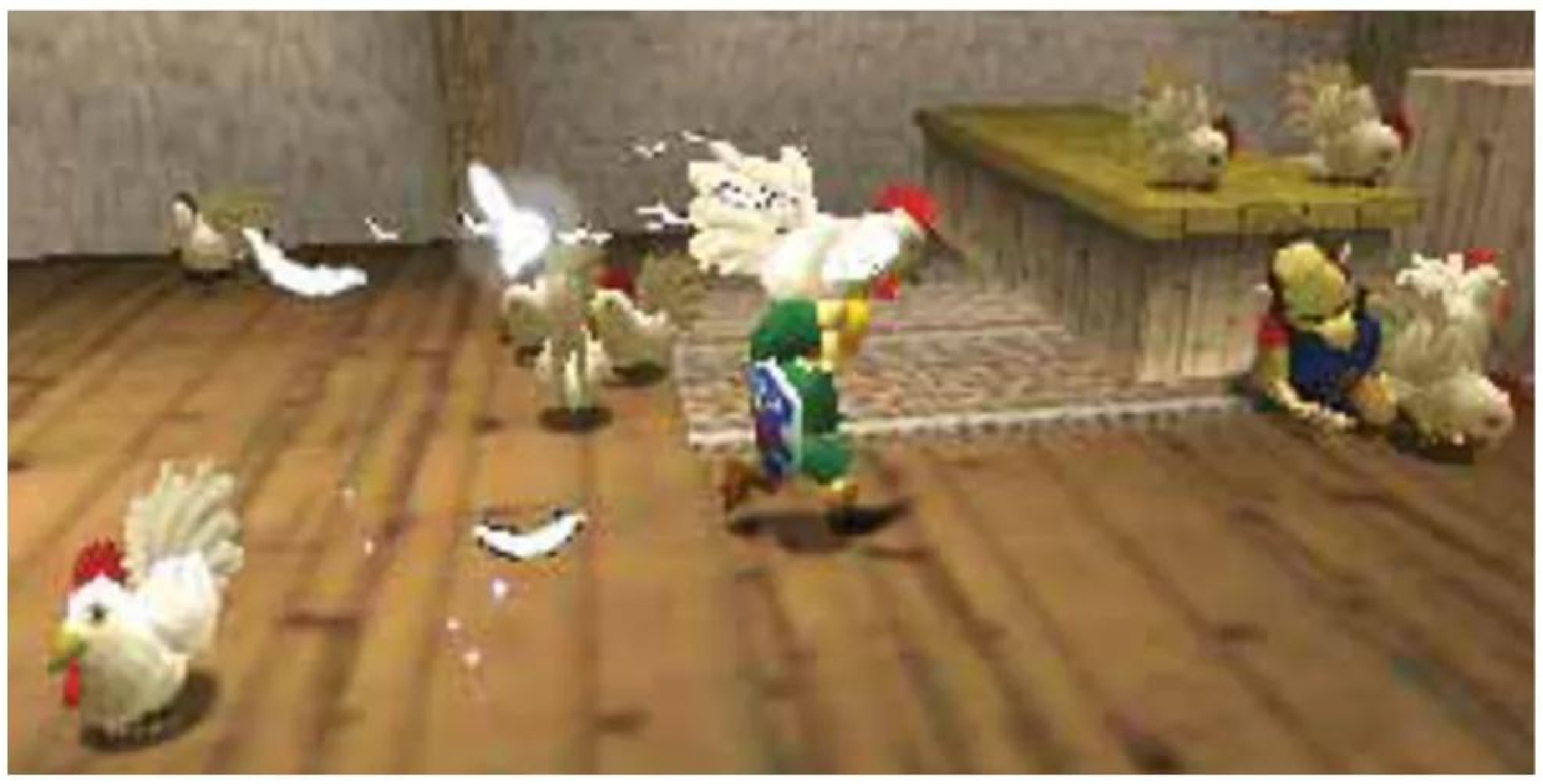
ENEMY TARGETING

■ Attacking enemies in a 3D space was always a little cumbersome in 3D action-adventure games. Or at least, it was until *Ocarina Of Time* arrived with its ingenious Z-Targeting lock-on system. A staple of the genre today, it allowed the player to intuitively snap the camera to an enemy, giving Link the freedom to circle and strafe around monsters without losing the ability to follow or dish out attacks; where would we be today without such an important game system?



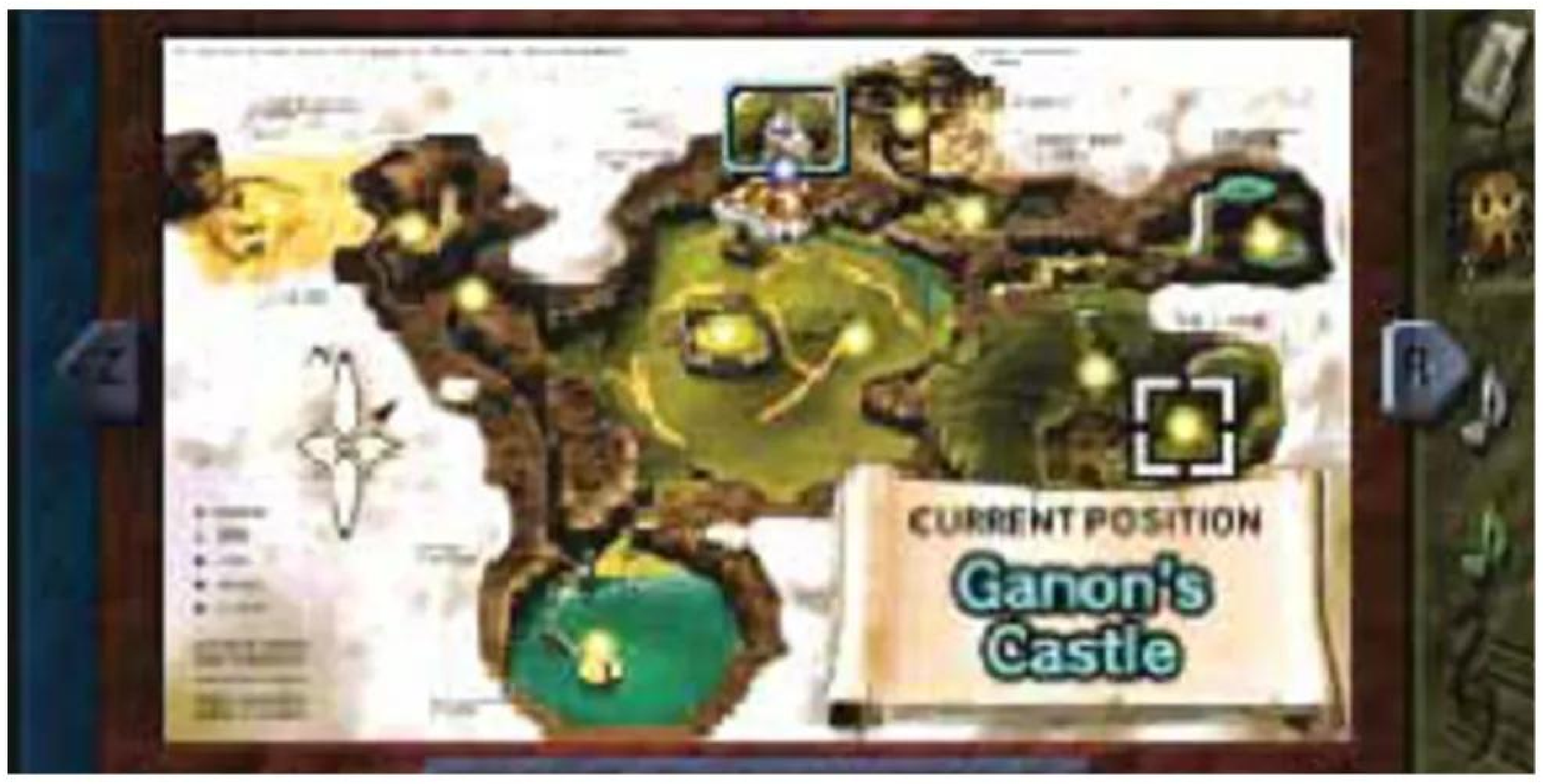
PLATFORMING EXCELLENCE

■ *Super Mario 64* is a classic, a showcase for the brilliance of Nintendo in the Nineties, but it also showcased some of the pitfalls of platform navigation in a 3D space. As the two games were developed in tandem, it gave the team plenty of time to make adjustments and tweaks to the controls and camera, ultimately ensuring that – by the time that *Ocarina Of Time* was released – it handled far more confidently in the tight dungeon enclosures.



CONTEXT-SENSITIVE ACTIONS

■ With so many actions available to the player – many of which were new to gaming – Nintendo massively simplified the control system to ensure play was as smooth as possible. Context-sensitive actions allowed multiple tasks to be assigned to one button, cutting the fuss of learning too many controls and also subtly guiding the player around its environments – it let Link adventure without worry, only being given the option to move boxes or climb when Nintendo deemed it possible.

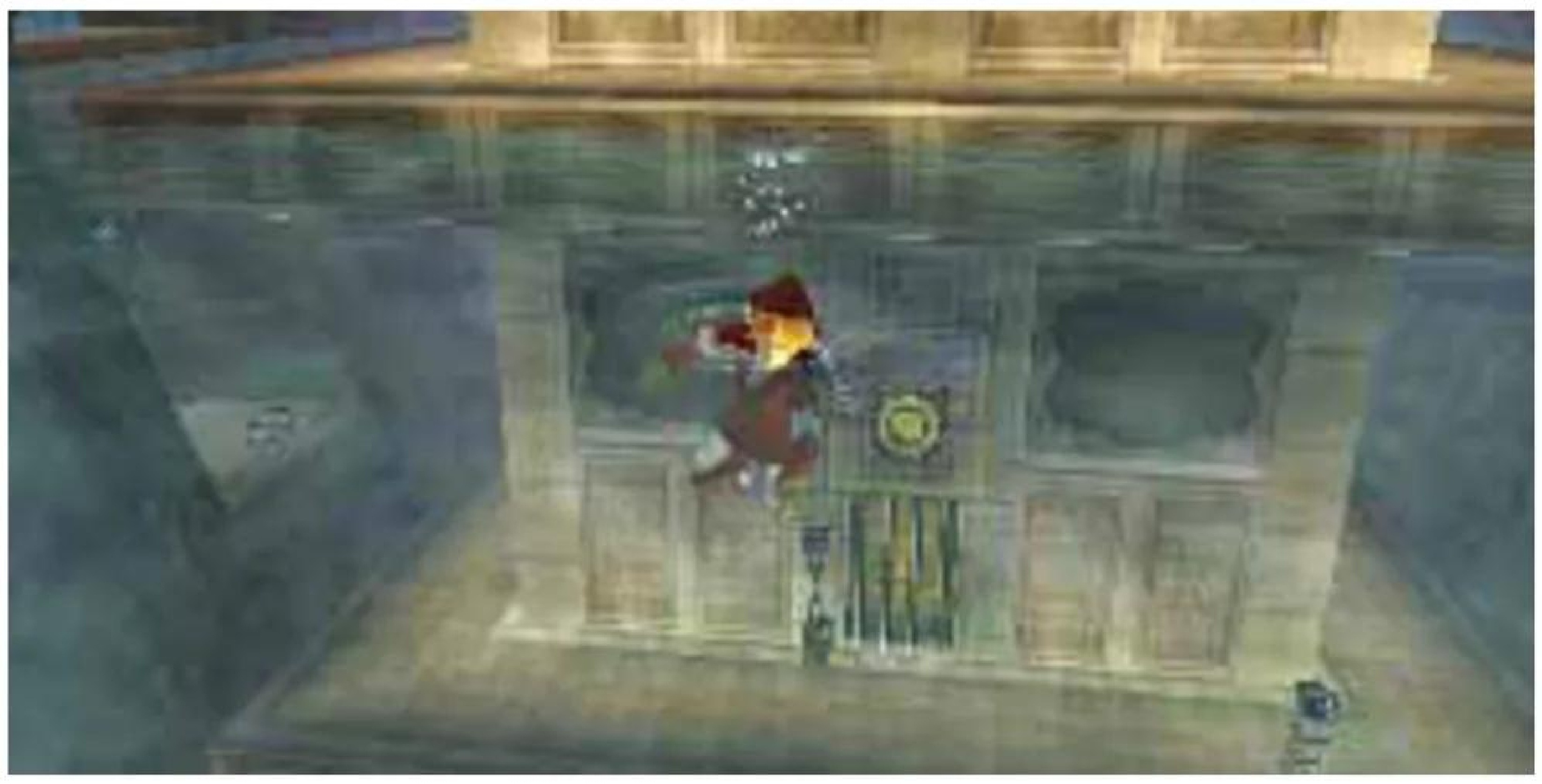


SPRAWLING OVERWORLD

■ One of the coolest aspects of *Zelda* games was the inclusion of an overworld, a hub that linked all levels, dungeons and areas together. This was expanded massively for *OOT*, a space that was large enough to make you feel like you were a small part of a world that existed around you. If you could see it, you could reach it – even if that meant searching out specific items and returning later. The sparse, realistic Hyrule overworld is still one of Nintendo's greatest accomplishments.

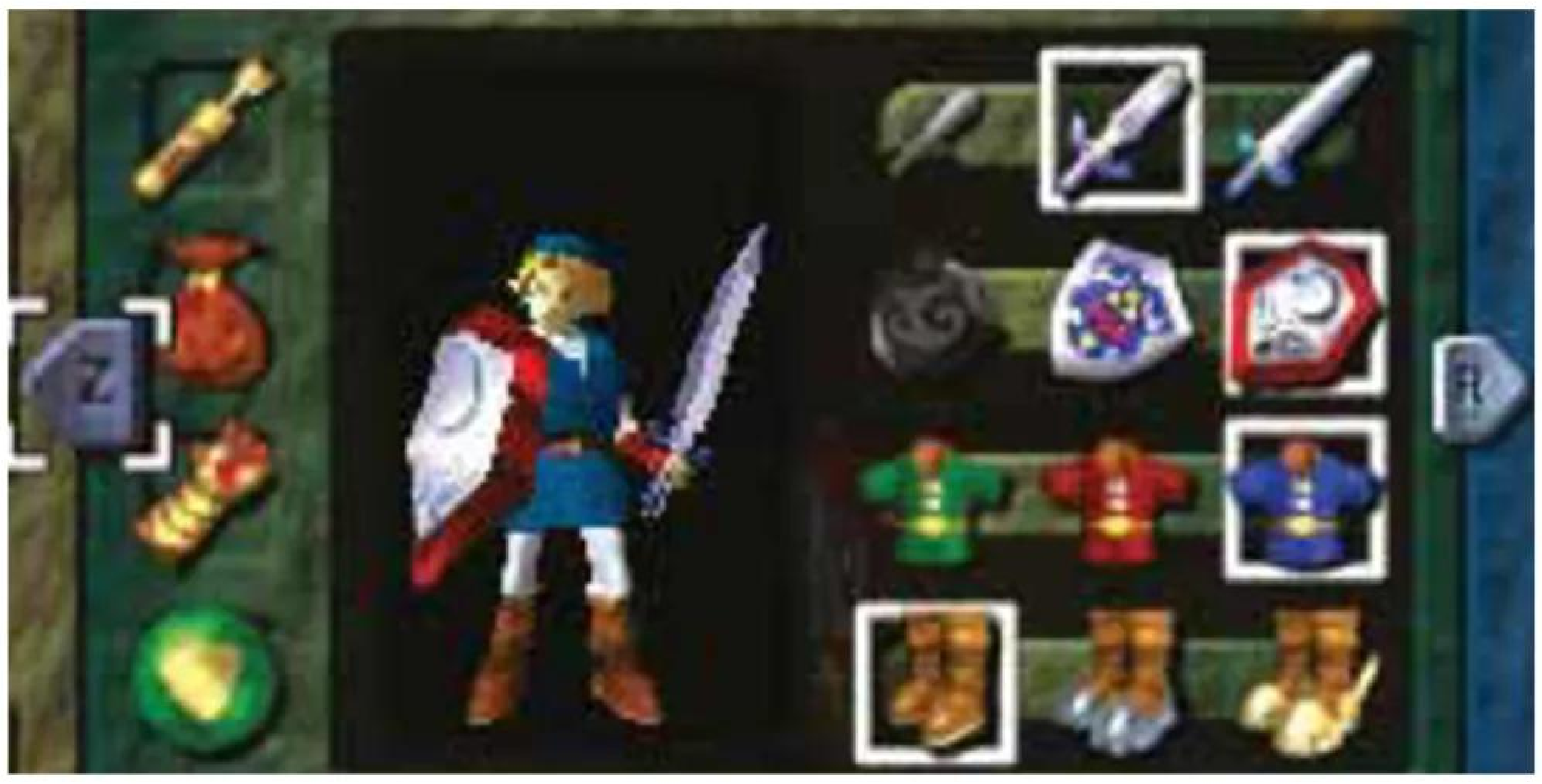
HEARTFELT NARRATIVE

■ Unlike most other Nintendo games released at the time – in which mechanics took precedence over all else – *OOT* had story at its centre. While joyful to playthrough, it had a dark undertone of loss and tragedy. Link's journey across timelines, to stop a disaster he inadvertently had a hand in creating, has proven to be one of gaming's greatest; the time-travel mechanics, be they via the Ocarina or Master Sword, were a powerful way of dragging players wholeheartedly into the adventure.



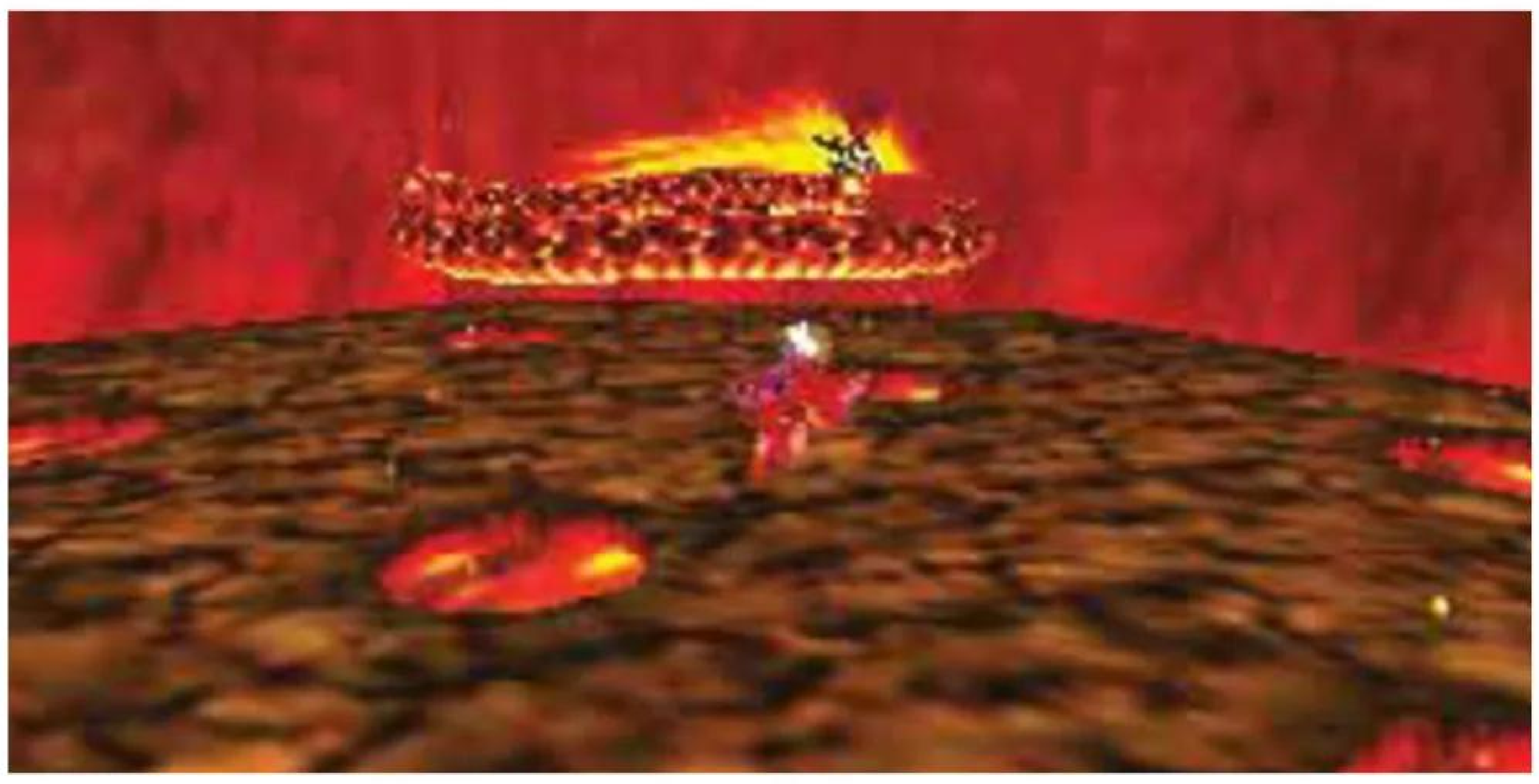
DUNGEON DESIGN

■ The temples in *OOT* are a marvel of 3D design and execution, with each offering challenge and reward to players ready to push their understanding of the combat and platforming mechanics. Even the Water Temple, largely considered to be the toughest challenge in the game and a headache for players the world over, has proven itself to be a masterclass in spatial awareness, demonstrating a willingness to challenge convention and take risks in every area of game design.



EXTENDED ADVENTURING

■ All throughout the adventure, Link will acquire and collect different items and weapons that greatly expand the adventure. Many introduced new abilities, with Nintendo gradually introducing them through well-masked tutorials in the guise of puzzle solving before letting you loose with them in boss battles and, eventually, the overworld to access new areas. It has proven to be a staple of *Zelda* design, not to mention a process carried across into various other genres and game types.



BOSS DESIGN

■*The Legend Of Zelda* boss design has always been fairly simple: find the flashing bit of the enemy and hit it with whatever new item has just been gifted to you. That's okay though, because *OOT* masked this with memorable and striking encounters. *Zelda* bosses made a wonderful transition into 3D, always looking large enough to make the task ahead seem implausibly difficult, with impossibly-tight mechanics making it seem ultimately achievable.

GOLDE

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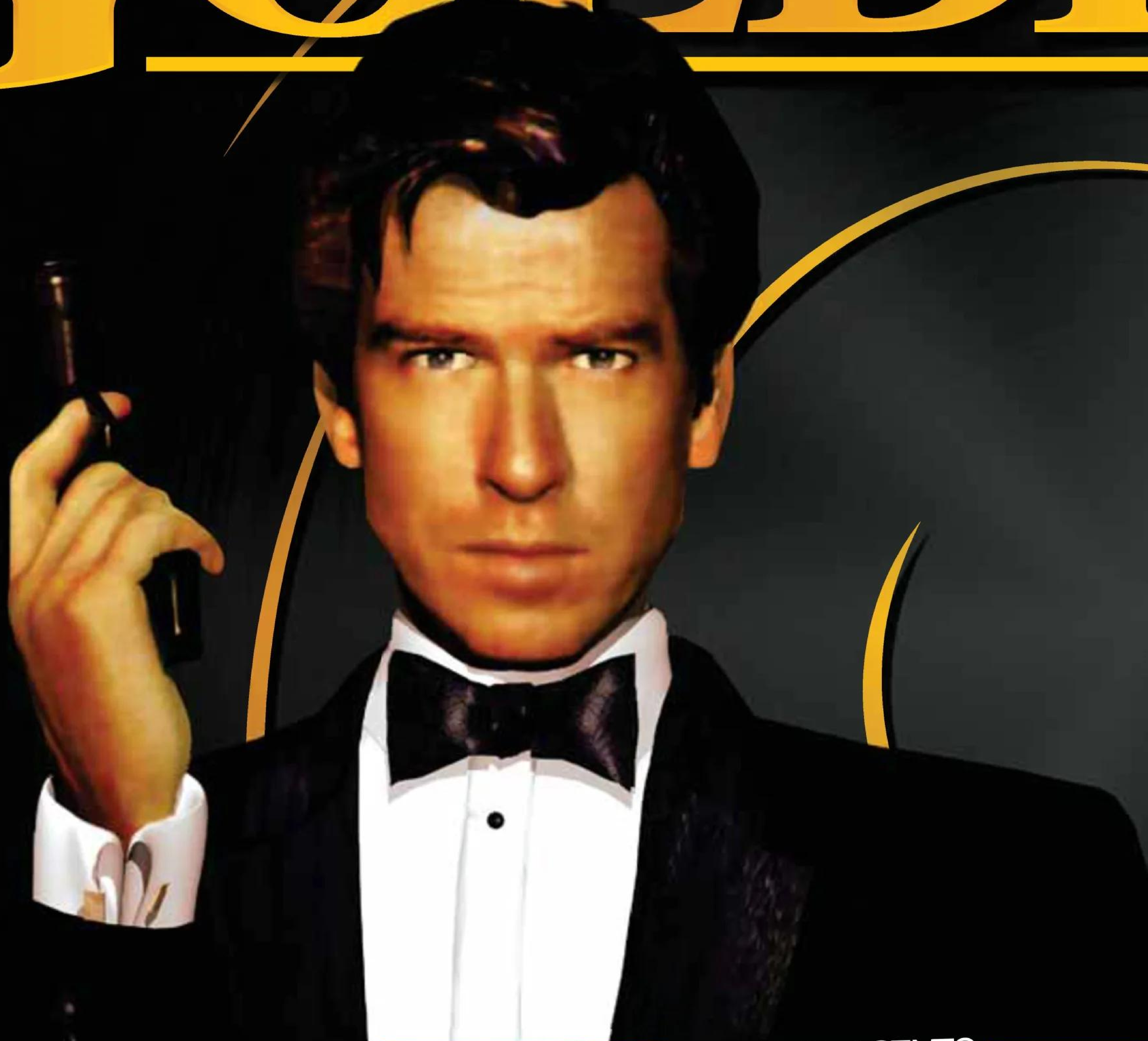
156 Making the multiplayer mode



RARE'S TOP DOUBLE-O AGENTS

MARTIN HOLLIS

Producer and director

Favourite Bond film: From Russia With Love

Preferred multiplayer mode: Archives – Licence To Kill

KARL HILTON

Scenic art director

Favourite Bond film: The Spy Who Loved Me

Preferred multiplayer mode: Complex – Golden Gun, first to ten kills. And no radar!

DAVID DOAK

Original screenplay

Favourite Bond film: Goldfinger

Preferred multiplayer mode: Temple - One-shot kills

ENEYE

BACK IN 2019 WE GATHERED TOGETHER THE NINE MEMBERS OF GOLDENEYE'S ORIGINAL DEVELOPMENT TEAM TO TALK ABOUT THE CREATION AND LEGACY OF THEIR SEMINAL N64 SHOOTER. PAUL DRURY SHAKES THE VODKA MARTINIS

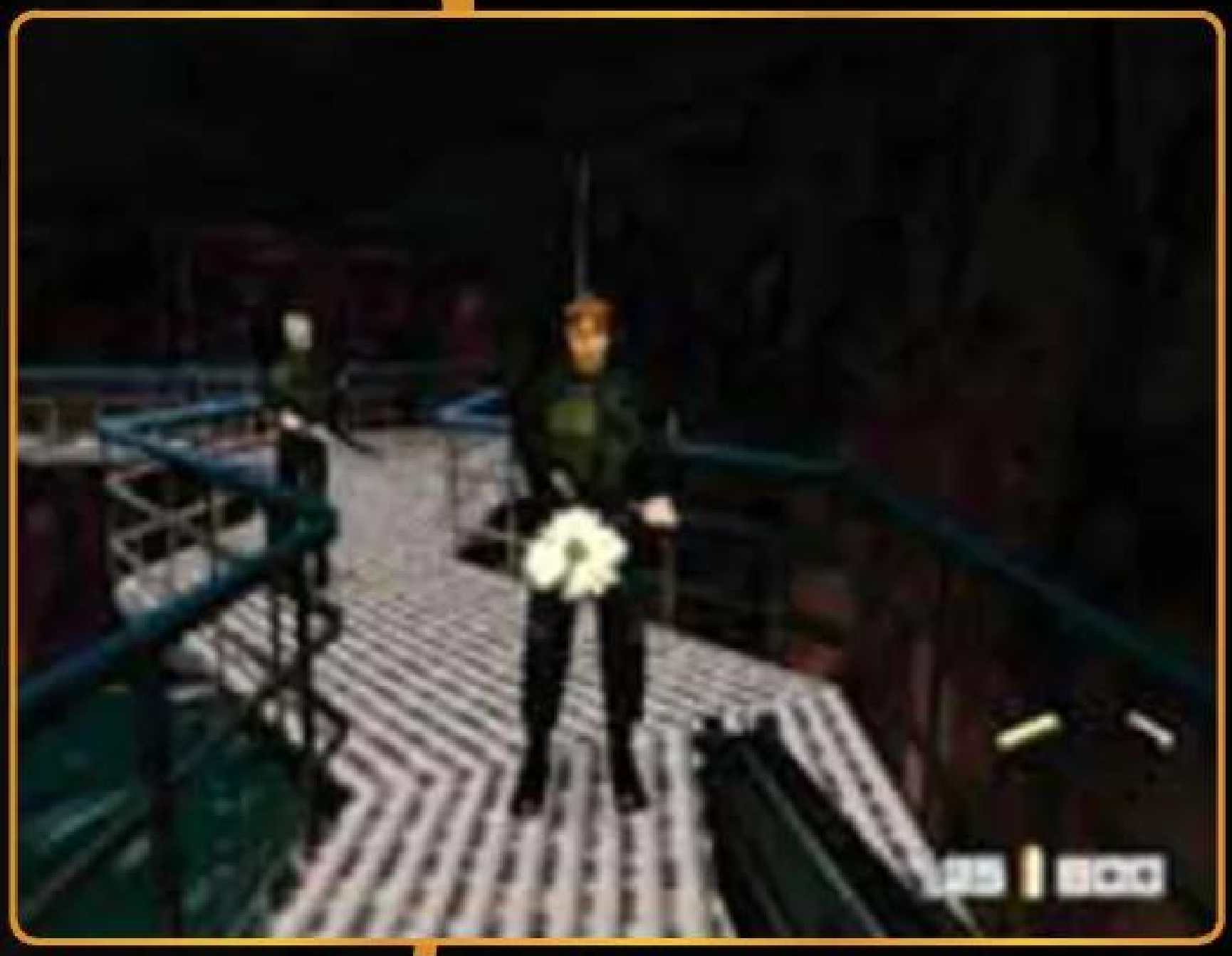
Gamers knew the score in the Nineties. Rare made platformers, you played first-person shooters on PC and any game based on a film was going to be awful. Then came *GoldenEye 007* and changed all that.

It was released two years after the film had hit the big screen, only a few months before the next entry in the franchise, *Tomorrow Never Dies*, came out, and with no great expectations of success, even from the team that had developed it. It went on to shift a staggering 8 million copies, making it the third biggest selling title on Nintendo's 64-bit console, and invariably appears in the echelons of those perennial 'Best Ever Games' lists. It also made number ten in **Retro Gamer**'s definitive countdown in issue 150, in case you were wondering.

That success is perhaps even more remarkable when you consider that for the majority of the dev team, *GoldenEye* was their first professional title. Indeed, Tim and Chris Stamper, the heads of Rare, had to remind the team that "this wasn't their university project" as development dragged on for over three years. Yet the fact that most of the team were new to the business meant they weren't constrained with notions of what was and wasn't possible in game design. If they thought of a good idea, they tried to implement it.

This naivety yielded some groundbreaking results. The game pioneered body-specific hit reactions, disconnecting the gun from the camera, the use of a sniper rifle, environment mapping (look closely and you'll see low-res reflections of your surroundings on shiny surfaces) and even dual-wielding of weapons, all features which have become fixtures in the shooter landscape. More than that, *GoldenEye* proved that a story-driven FPS could work on consoles… and that deathmatches never really get old.

Gathering together all nine core members of the team has been inspiring. Some stayed at Rare and worked on its spiritual sequel *Perfect Dark*. Some went on to set up Free Radical, the home of the *TimeSplitters* series. Some have stayed in games, others have moved on but all can agree on two things: being part of the *GoldenEye* team was an experience they will never forget and playing as Oddjob in multiplayer is always cheating.



» Home console first-person shooters at the time were seen as tricky to pull off, but Rare managed to do it in style.

» *GoldenEye* has its fair share of explosions, and then some.

MARK EDMONDS

Director of photography

Favourite Bond film:
Skyfall

Preferred multiplayer mode:
Temple – Grenade launchers and Licence To Kill

B JONES

Costume designer

Favourite Bond film:
Goldfinger

Preferred multiplayer mode:
Stack – First to 20 kills, remote mines

STEVE ELLIS

Second unit director

Favourite Bond film:
Casino Royale

Preferred multiplayer mode:
Temple – Golden Guns and Licence To Kill

GRAEME NORGATE

Original music and sound effects

Favourite Bond film:
Live And Let Die

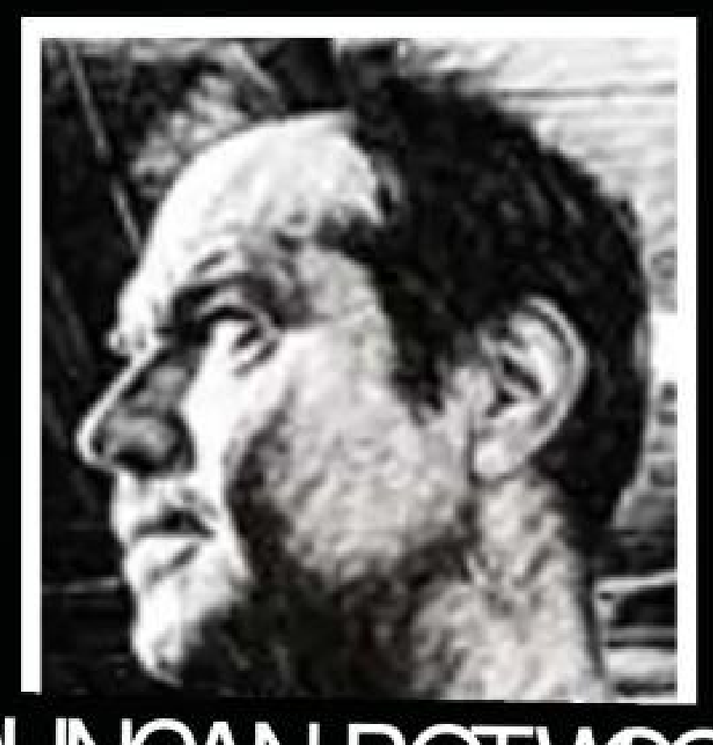
Preferred multiplayer mode:
Bunker – slappers only

GRANT KIRKHOPE

Original music

Favourite Bond film:
Casino Royale

Preferred multiplayer mode:
Egyptian – Licence To Kill



DUNCAN BOTWOOD

Production designer

Favourite Bond film:
On Her Majesty's Secret Service

Preferred multiplayer mode:
Archives – Pistols only, one-shot kills

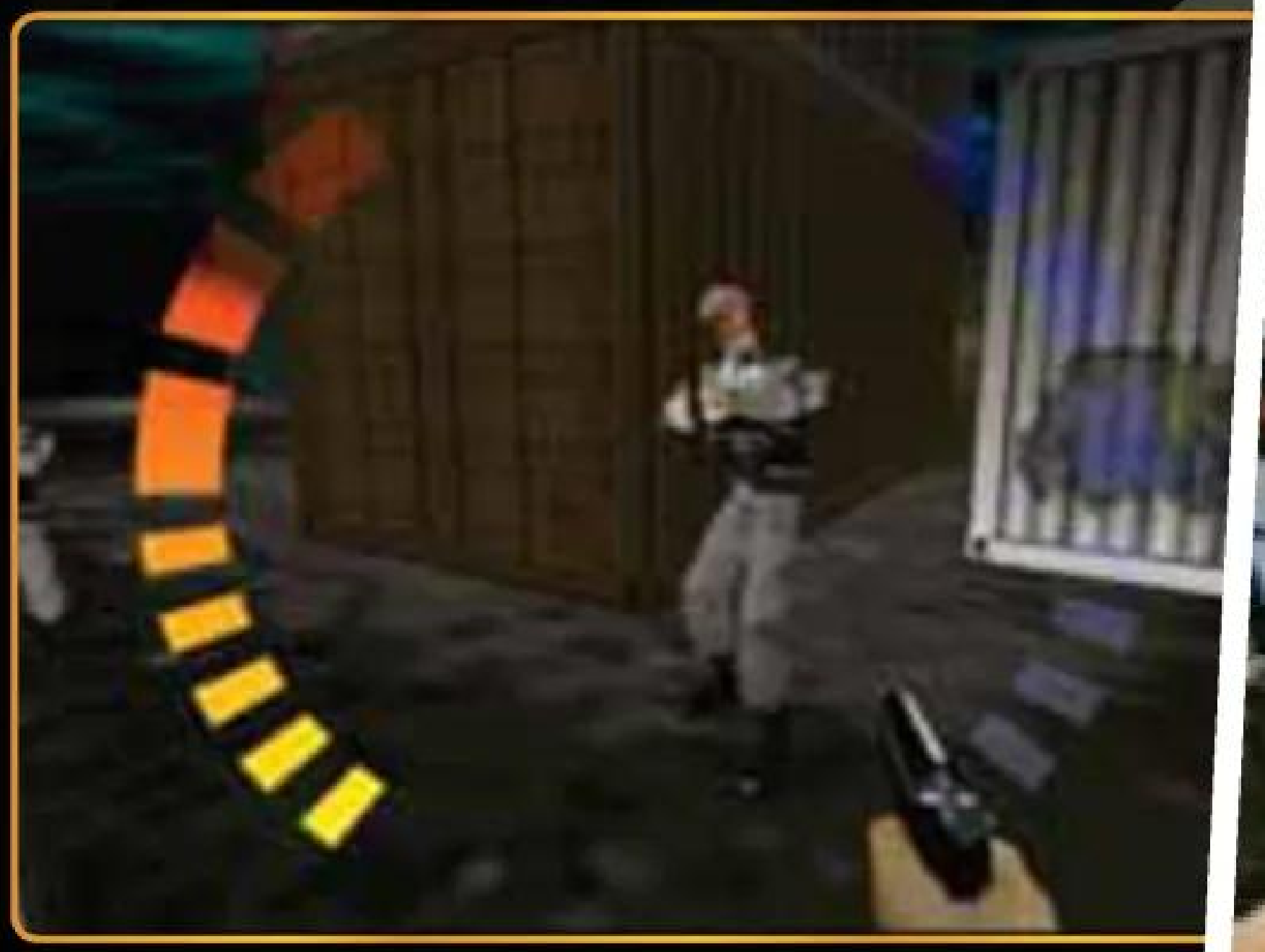
POLISHING GOLDENEYE

MARK EDMONDS ON DEVELOPING A FIRST-CLASS FPS

For Mark Edmonds, his first contribution to the development of *GoldenEye* was sat alone in a room in the Stamper mansion, filleting joints.

"I didn't really know what I was working on," explains Mark, understandably. "I was asked to investigate creating filleted joints for an animated 3D character system; basically, a smooth skin over joints, like an elbow, rather than just having a solid block for an upper and lower arm. I had no idea it was connected to *James Bond* but I must have passed the test because I got moved over to the stable block and onto the team proper. It was great just to be working on my first videogame!"

Programmer Mark joined project leader Martin Hollis and artist Karl Hilton and the trio got to work on early builds of *GoldenEye*. Initially, the game was heavily influenced by Sega's *Virtua Cop* with Bond following a predetermined route through levels. "We were using this amazing new invention called the analogue stick to aim a crosshair," grins Mark. "But then we thought, 'Wouldn't it be cool to play a game like *Doom* with actual 3D graphics? That would be a new experience!' And we knew the Nintendo 64 was capable of rendering 3D graphics from any orientation or direction."

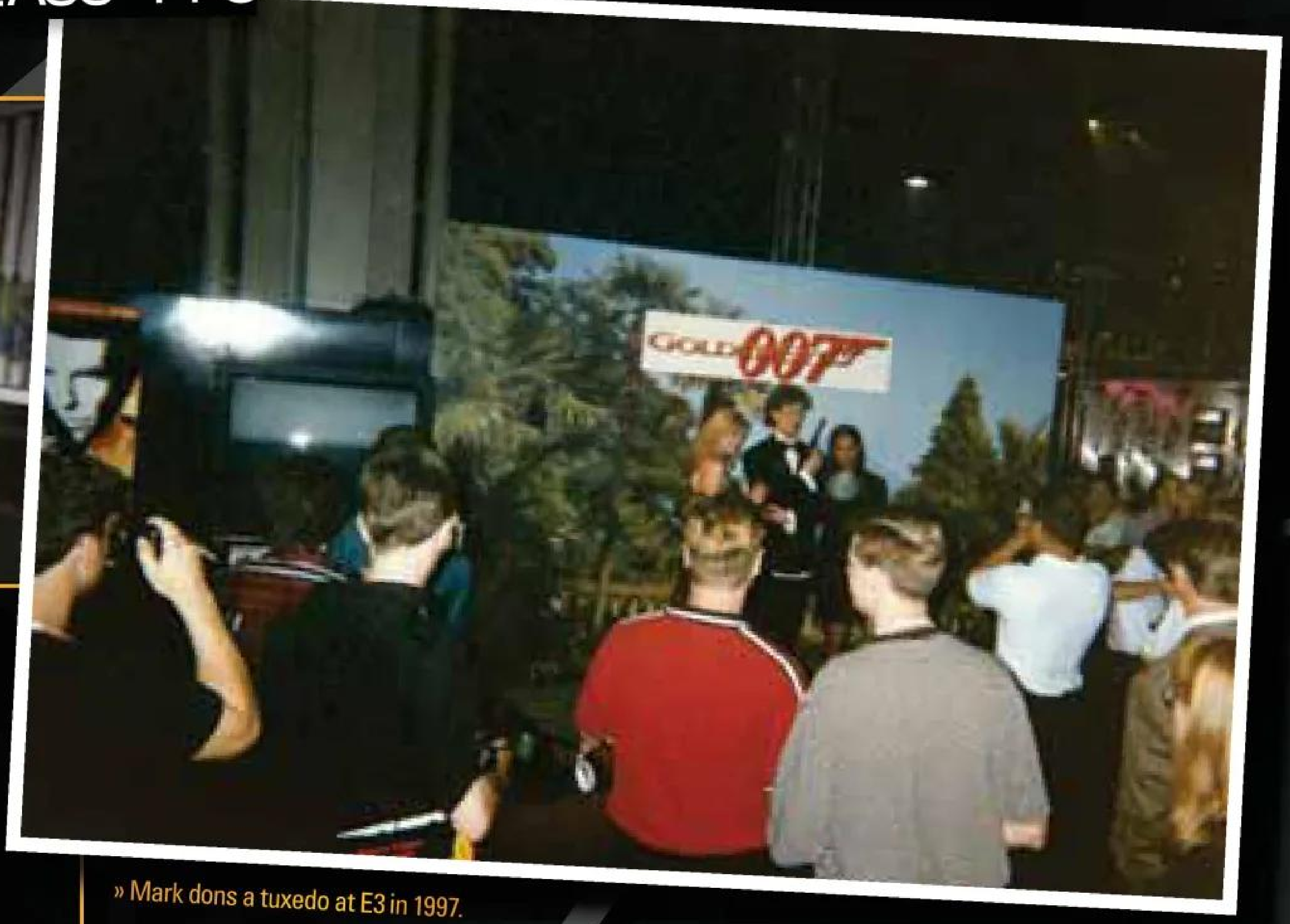


» The bars get flack for being intrusive, but having a dynamic HUD was unheard of at the time.

The team decided to take Bond 'off the rails', though knowing exactly what the N64 was capable of required a good deal of faith. Its development system used high-end Silicon Graphics machines, a pleasure to work with, if prone to overheating, whilst the specifications of Nintendo's forthcoming console were yet to be finalised. "I vaguely remember being disappointed seeing the tech demos running on the first development consoles," admits Mark. "But once our own artists got going onto the project, they managed to make the graphics look good!"

Mark beavered away on the *GoldenEye* engine, taking art created in such packages as Alias and GameGen and rendering them in game. He helped develop the system which handled the motion captured animations, pioneering in their day, and worked on the enemy AI, so your foes could at least attempt to outwit your agent before crumpling in agony when you shot them in the groin. Yet despite all these innovative features, the team really wasn't sure anyone else would be impressed.

"It was amazing to travel to the E3 show in 1997 but I don't remember much reaction to the game there," says Mark. "It probably wasn't the right environment for people to get into it. It was only afterwards when the reviews started coming that I realised people actually did like it."



» Mark dons a tuxedo at E3 in 1997.

> **"WE WERE USING THIS AMAZING NEW INVENTION CALLED THE 'ANALOGUE STICK'"**
>
> Mark Edmonds

LOCATION, LOCATION

JETTING AROUND THE WORLD WITH BOND

ARKANGELSK

DAM

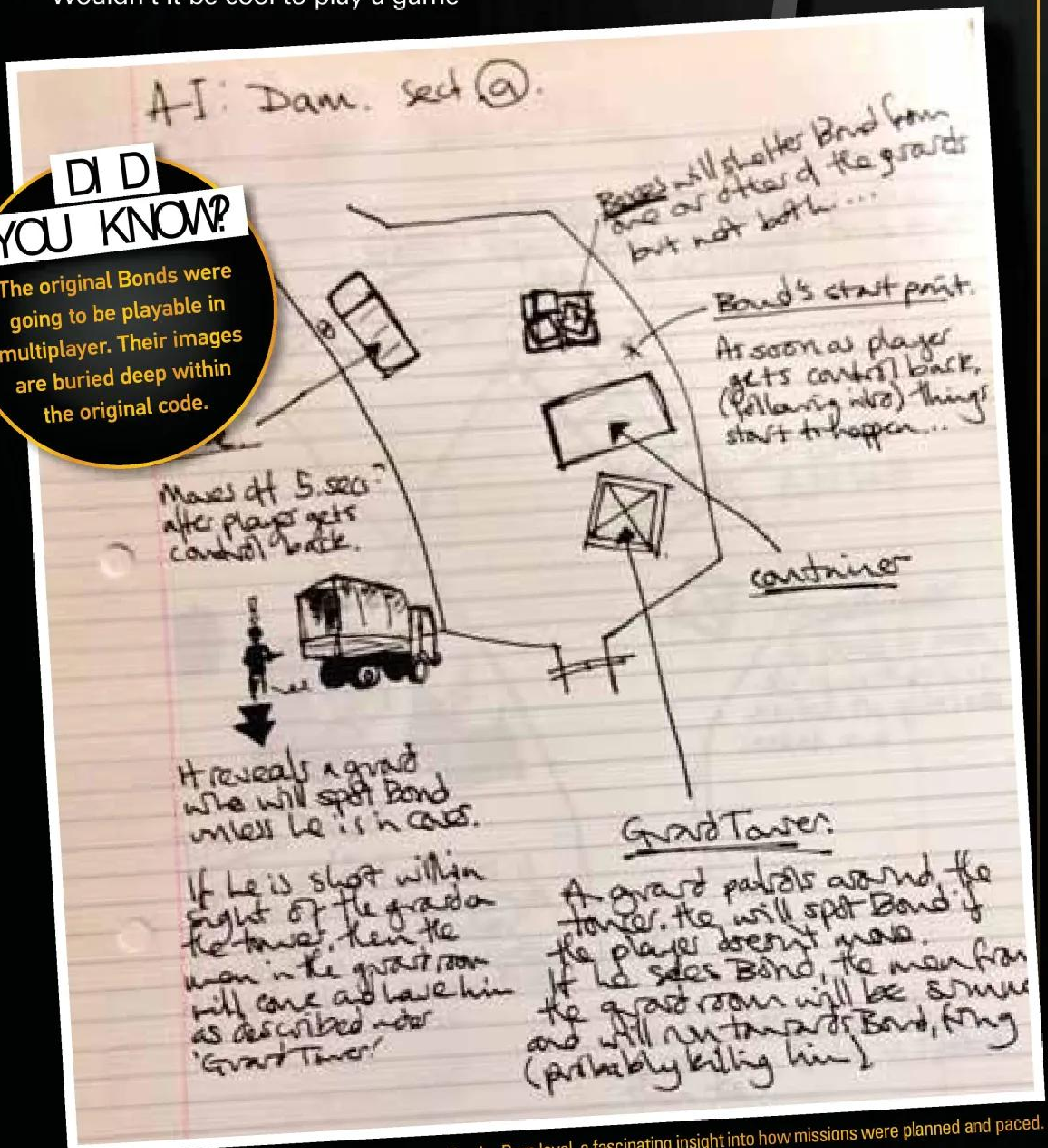
■ Your first mission takes at the Byelomorye dam. It's a heavily guarded location, but weapons like the sniper rifle make things easier.

FACILITY

■ Starting off in the bathrooms you have to make your way through the laboratories, and eventually the bottling room.

RUNWAY

■ You need to escape in a plane, but first you need to fight through a platoon of soldiers. Good job you have access to a tank, eh?



A-I: Dam. sect (a).

Boxes will shelter Bond from one or other of the guards but not both...

Bond's start point.

As soon as player gets control back, (following intro) things start to happen...

Moves off 5 secs after player gets control back.

container

It reveals a guard who will spot Bond unless he is in cover.

If he is shot within sight of the guard on the tower, then the man in the guard room will come and have him as described under 'Guard Tower'

Guard Tower.

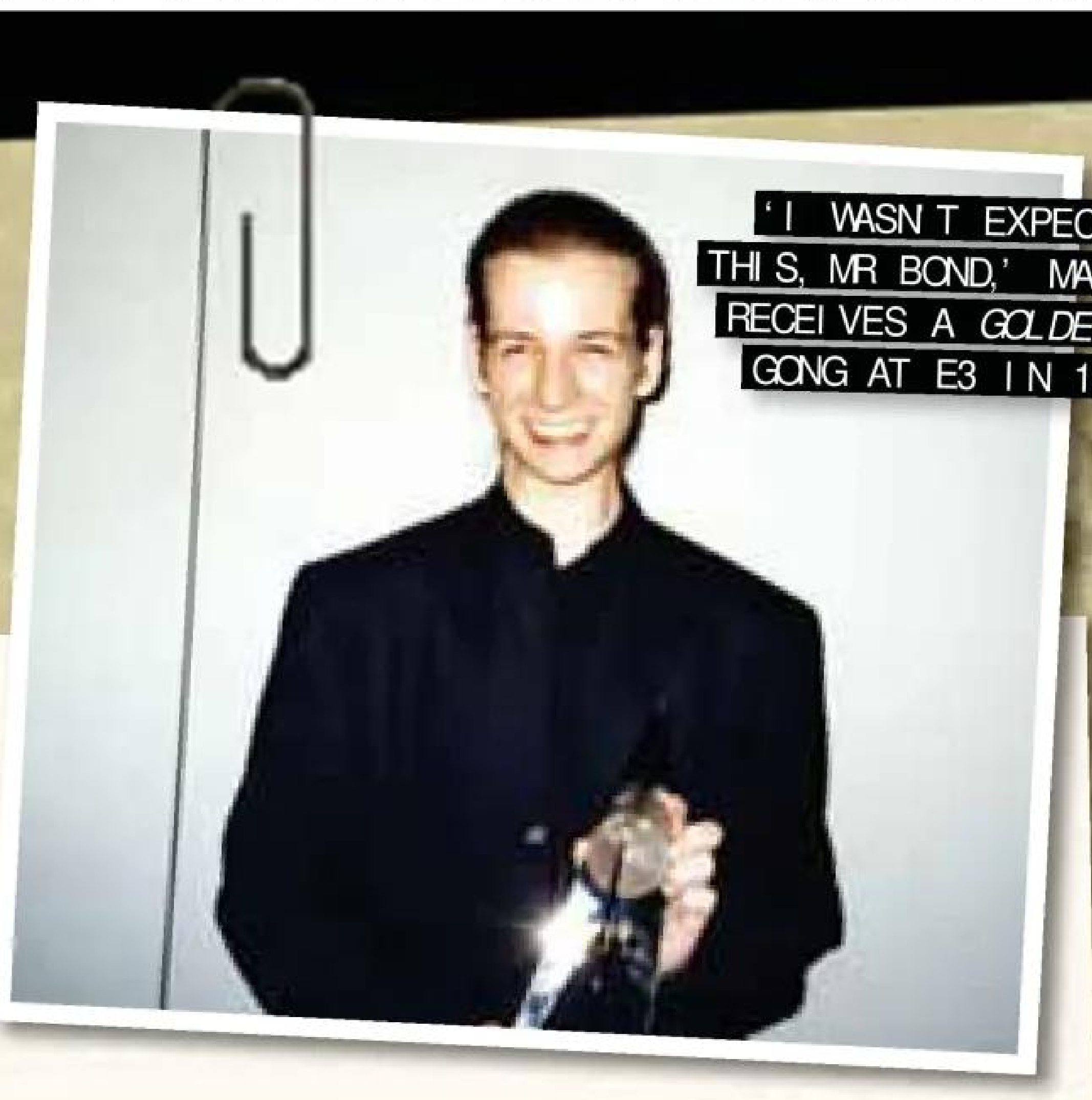
A guard patrols around the tower. He will spot Bond if the player doesn't move. If he sees Bond, the men from the guard room will be summoned and will run towards Bond, firing (probably killing him)

» Duncan's detailed level notes for the Dam level, a fascinating insight into how missions were planned and paced.

DID YOU KNOW?

The original Bonds were going to be playable in multiplayer. Their images are buried deep within the original code.

RARE'S VERY OWN M



'I WASN'T EXPECTING THIS, MR BOND,' MARTIN RECEIVES A *GOLDENEYE* GONG AT E3 IN 1998.

MARTIN HOLLIS ON LEADING THE TEAM

What was your reaction to being told you were to head up a team making a *Bond* game?

Oh, I wasn't approached. I'd heard on the grapevine, from my team leader on *Killer Instinct*, Mark Betteridge, I think, that the *Bond* licence was floating around. A couple of guys from the *Donkey Kong Country* team were going down to a press party for the film *GoldenEye* and Nintendo had told its friends at Rare there was a possibility we could make a game to go with it. Later, I heard they weren't going to take on the licence, so I went straight to Tim Stamper and said I'd like to do it.

Was he delighted you had stepped up to the challenge?

He didn't look chuffed or anything. He just said, 'Well, you better make a document then, Martin.' So I did. And it was all my own work, teacher.

We've seen that 'Top Secret' document online and it's impressive how many of those ideas, from the variety of missions to the effect of bullets on the environment, made it into *GoldenEye*.

I never really looked at it after a while. Once we were 20 per cent in, we just concentrated on making the game, not what I'd written. It's astonishing how much from the document made it into the final game. That was partly luck.

It was also down to the team you put together. How did you go about recruiting people to the project?

Of course I wanted good people, enthusiastic about the *Bond* universe... though not all of them were. They were just incredibly good craftspeople. I actually made a list of everyone in the company involved with development and scored them out of ten. I wrote notes on the side, too, and I spoke to Simon Farmer in production about each one and he'd tell me, 'Oh, you don't want them...' He knew if they were suitable for the project.

You sound a bit like M from the Bond films, with a dossier on everyone.

Well, I did wear all black at the time and had a confident swagger. It's hard to know how they viewed me. I was the only one who had made a game professionally before. Rare tended to hire people not from the games industry.

Was there an advantage to this being their first game - that your team didn't know what they couldn't do?

Oh certainly. I didn't know what we couldn't do either. It was supposed to be a three person project and take nine months or something. No one told me it would take three years and about ten people because no one knew.

Given it took so long to develop, were the Stamper brothers constantly harassing you to get it finished?

It's astonishing how little bother we got from them. They had the whole company to administer plus the financial agreement meant *GoldenEye* was a low risk project for Rare. And they might have been a little bit frightened of me. Why? I was extremely self-assured. That's putting it nicely. The Stampers created the environment, they hired the people I could pick from, we never had to worry about the project being cancelled or being forced in a different direction and we had their trust. Their role was huge.

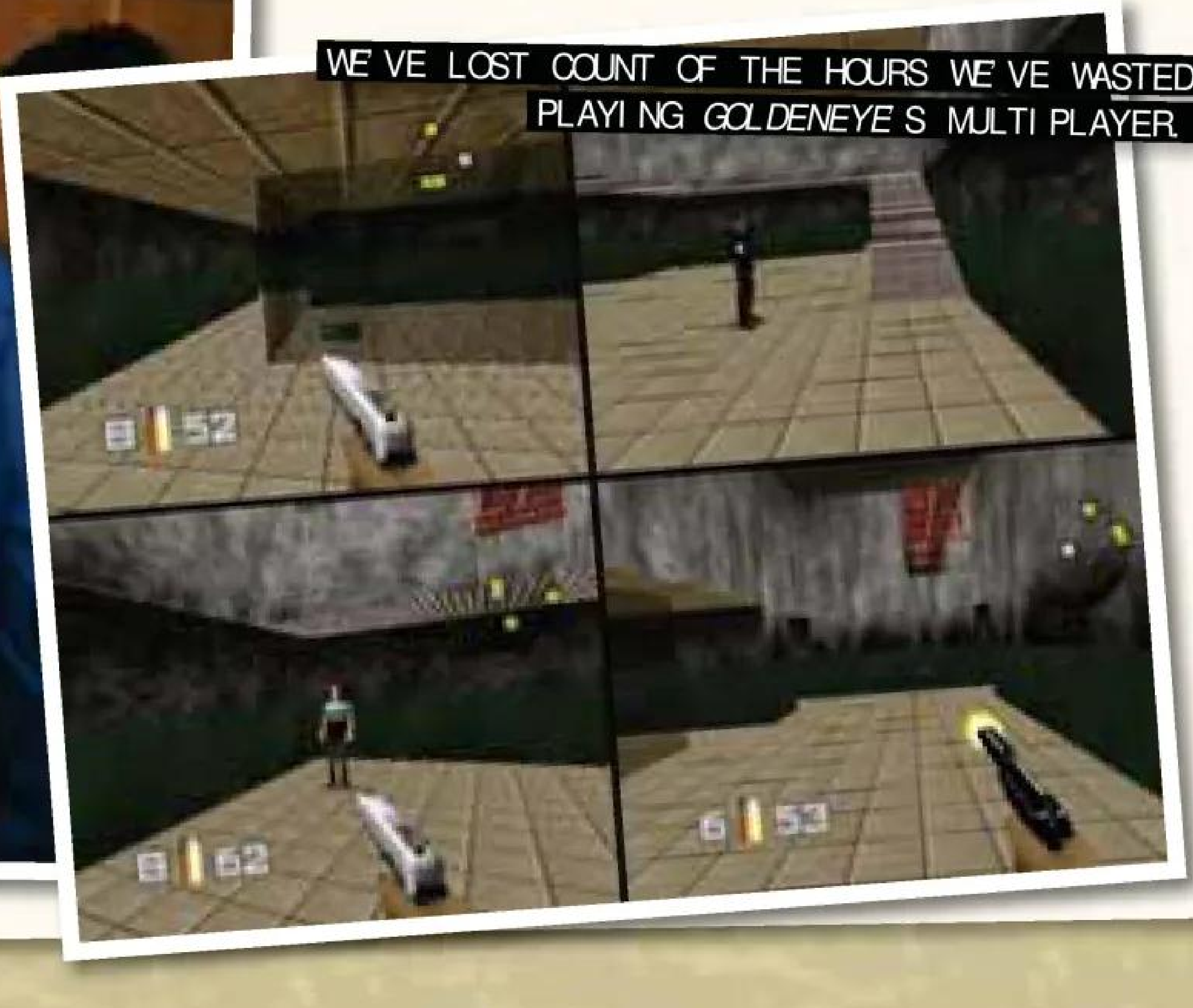
Didn't Nintendo, worried about the violence that took place in the game, ask you to put in cutscenes at the end of each level, showing everyone who had been killed getting up and shaking hands?

Yes, and I know when you read that it seems ridiculous but you have to look deeper at feedback like that. It was all about the close up killing. You could see the pain and suffering – they'd get down on their knees and then you'd shoot them again in the head. It felt personal. Unsurprisingly, this didn't sit well with Nintendo. I was trying to negotiate a line between being true to *Bond* and Nintendo's family-friendly brand. We did soften some things round the edge – I think we dialled down the redness of the blood by 20 per cent.

Were you pleased you literally stuck to your guns?

Many people at Rare, Nintendo and the world in general have been incredibly nice to me, for decades! *GoldenEye* is such a good thing to have on your CV and was such a pleasure to make.

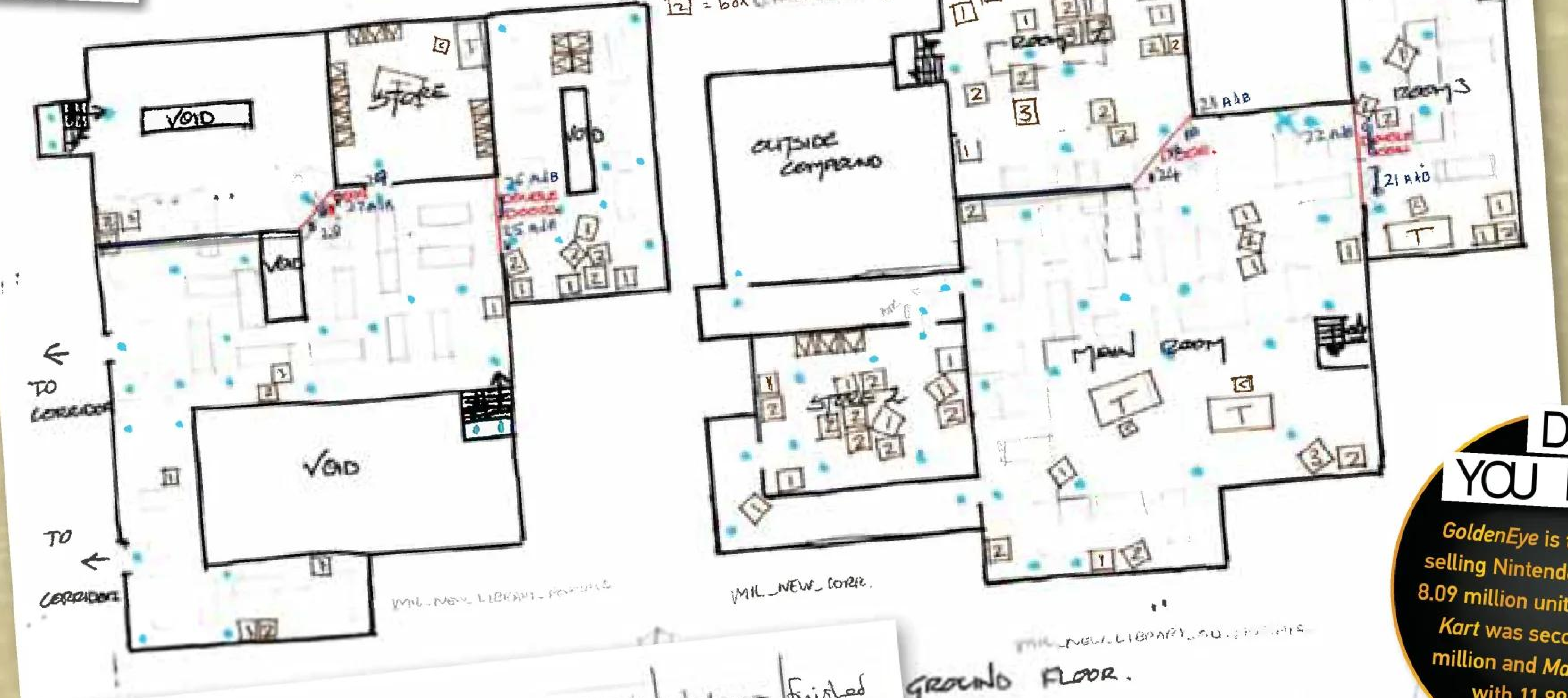
MARTIN CHECKS HIS OUTFIT BACKSTAGE AT E3 IN 1997.



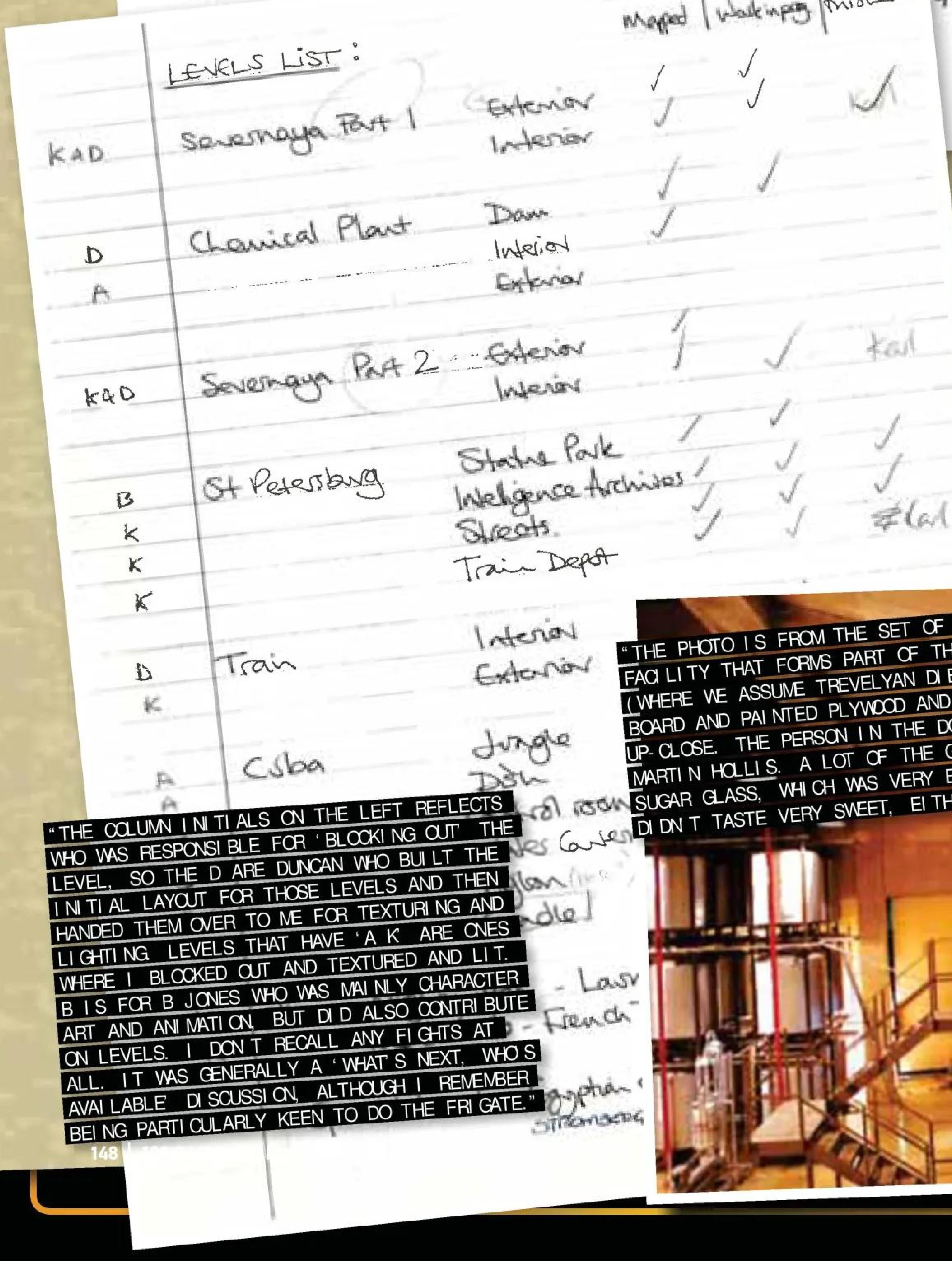
WE'VE LOST COUNT OF THE HOURS WE'VE WASTED PLAYING *GOLDENEYE*'S MULTIPLAYER.

BOND BLUEPRINTS

KARL HILTON TALKS US THROUGH THE VARIOUS DESIGN ASPECTS OF KEY PARTS OF RARE'S 007 GAME



"IT'S HARD TO SAY WHEN THIS WAS DONE, AS THE PROJECT RAN FOR TWO YEARS. I THINK THE BLUE DOTS WILL BE FROM DAVID DOAK, SHOWING POTENTIAL SPAWN POINTS FOR GUARDS. THE LEVEL WILL HAVE ORIGINALLY BEEN BUILT VERY CLOSE TO THIS DESIGN, BUT THEN, AS WE ACTUALLY PLAYED THE LEVEL, I WOULD OFTEN GO IN AND MAKE CHANGES BASED ON DAVE'S REQUESTS; BLOCKING A VIEW OR OPENING UP AN ALTERNATIVE ROUTE ETC."



LEVELS LIST:

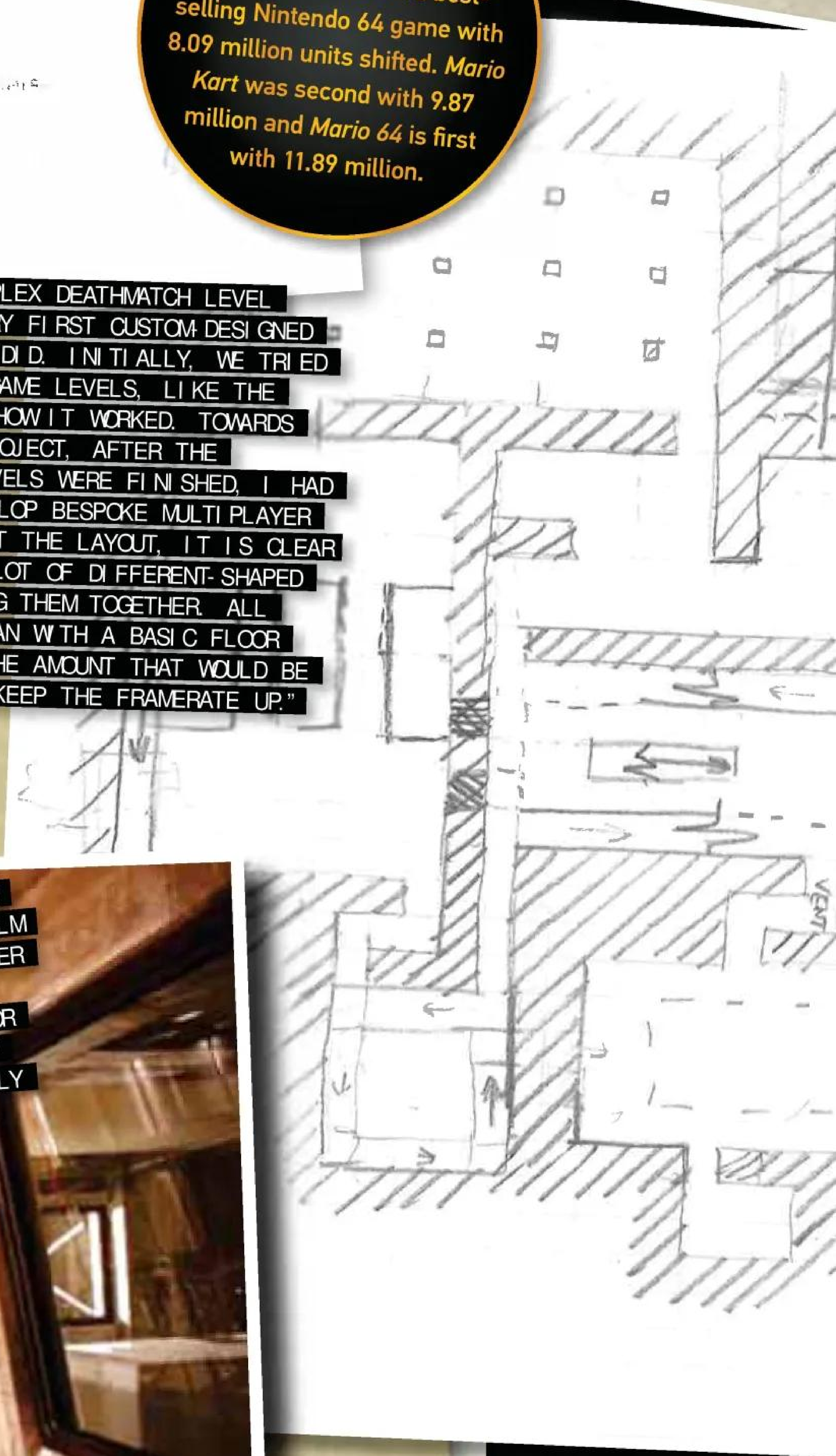
			Mapped	Walkinpeg	Finished
KAD	Severnaya Part 1	Exterior	✓	✓	K✓
		Interior	✓	✓	
D	Chemical Plant	Dam	✓	✓	
A		Interior	✓		
		Exterior			
KAD	Severnaya Part 2	Exterior	✓	✓	Karl
		Interior			
B	St Petersburg	Statue Park	✓	✓	✓
K		Intelligence Archives	✓	✓	✓
K		Streets.	✓	✓	≠ Karl
K		Train Depot			
D	Train	Interior			
K		Exterior			
A	Cuba	Jungle			
A		Dish			

"THE COLUMN INITIALS ON THE LEFT REFLECTS WHO WAS RESPONSIBLE FOR 'BLOCKING OUT' THE LEVEL, SO THE D ARE DUNCAN WHO BUILT THE INITIAL LAYOUT FOR THOSE LEVELS AND THEN HANDED THEM OVER TO ME FOR TEXTURING AND LIGHTING. LEVELS THAT HAVE 'A K' ARE ONES WHERE I BLOCKED OUT AND TEXTURED AND LIT. B IS FOR B JONES WHO WAS MAINLY CHARACTER ART AND ANIMATION, BUT DID ALSO CONTRIBUTE ON LEVELS. I DON'T RECALL ANY FIGHTS AT ALL. IT WAS GENERALLY A 'WHAT'S NEXT, WHO'S AVAILABLE' DISCUSSION, ALTHOUGH I REMEMBER BEING PARTICULARLY KEEN TO DO THE FRIGATE."

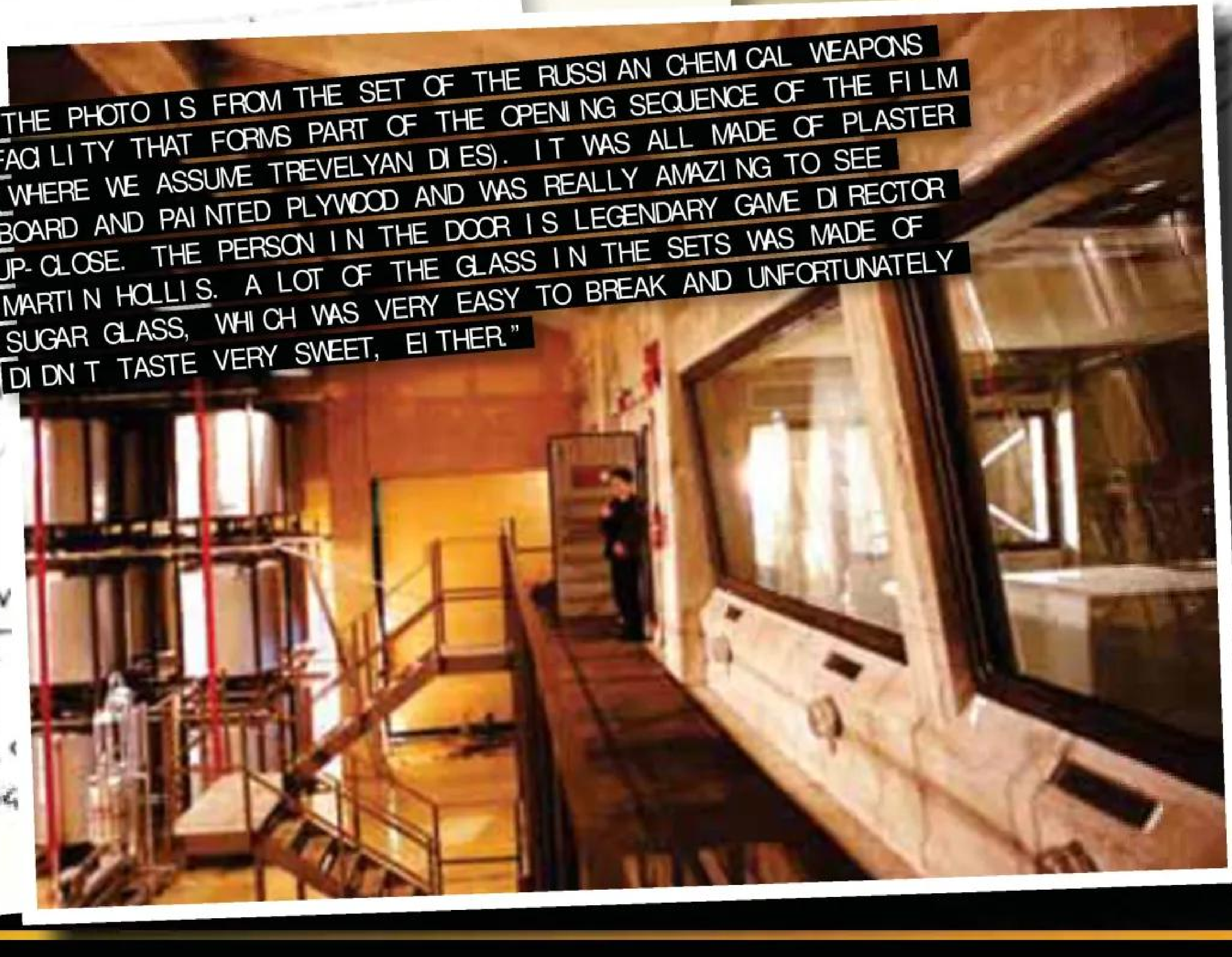
DID YOU KNOW?

GoldenEye is the third best-selling Nintendo 64 game with 8.09 million units shifted. *Mario Kart* was second with 9.87 million and *Mario 64* is first with 11.89 million.

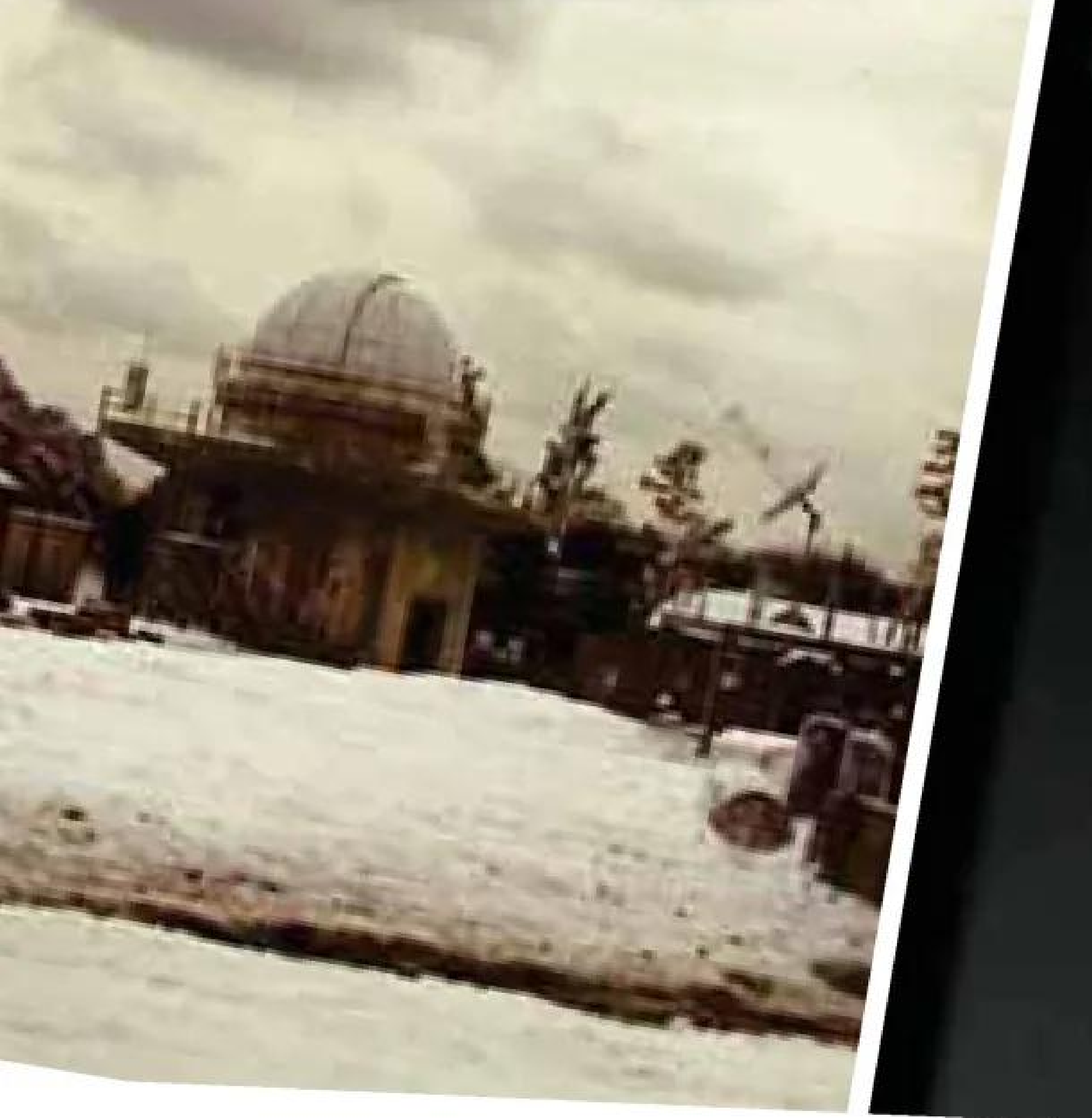
"THIS IS THE COMPLEX DEATHMATCH LEVEL WHICH WAS THE VERY FIRST CUSTOM-DESIGNED DM LEVEL THAT WE DID. INITIALLY, WE TRIED SOME ADAPTED IN-GAME LEVELS, LIKE THE FACILITY, TO SEE HOW IT WORKED. TOWARDS THE END OF THE PROJECT, AFTER THE SINGLE-PLAYER LEVELS WERE FINISHED, I HAD SOME TIME TO DEVELOP BESPOKE MULTIPLAYER LEVELS. LOOKING AT THE LAYOUT, IT IS CLEAR I'M TRYING OUT A LOT OF DIFFERENT-SHAPED SPACES AND LINKING THEM TOGETHER. ALL LEVEL DESIGNS BEGAN WITH A BASIC FLOOR PLAN TO CONTROL THE AMOUNT THAT WOULD BE DRAWN TO TRY AND KEEP THE FRAMERATE UP."

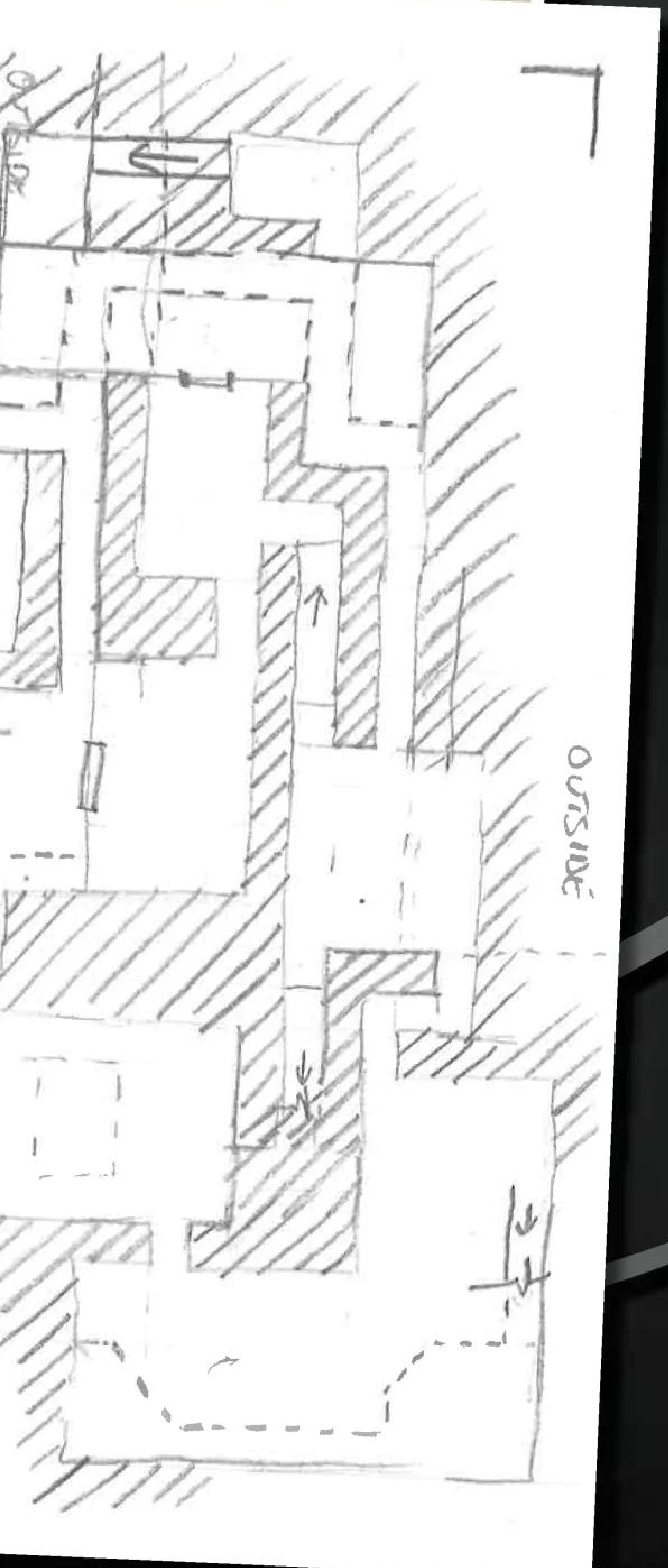


"THE PHOTO IS FROM THE SET OF THE RUSSIAN CHEMICAL WEAPONS FACILITY THAT FORMS PART OF THE OPENING SEQUENCE OF THE FILM (WHERE WE ASSUME TREVELYAN DIES). IT WAS ALL MADE OF PLASTER BOARD AND PAINTED PLYWOOD AND WAS REALLY AMAZING TO SEE UP-CLOSE. THE PERSON IN THE DOOR IS LEGENDARY GAME DIRECTOR MARTIN HOLLIS. A LOT OF THE GLASS IN THE SETS WAS MADE OF SUGAR GLASS, WHICH WAS VERY EASY TO BREAK AND UNFORTUNATELY DIDN'T TASTE VERY SWEET, EITHER."



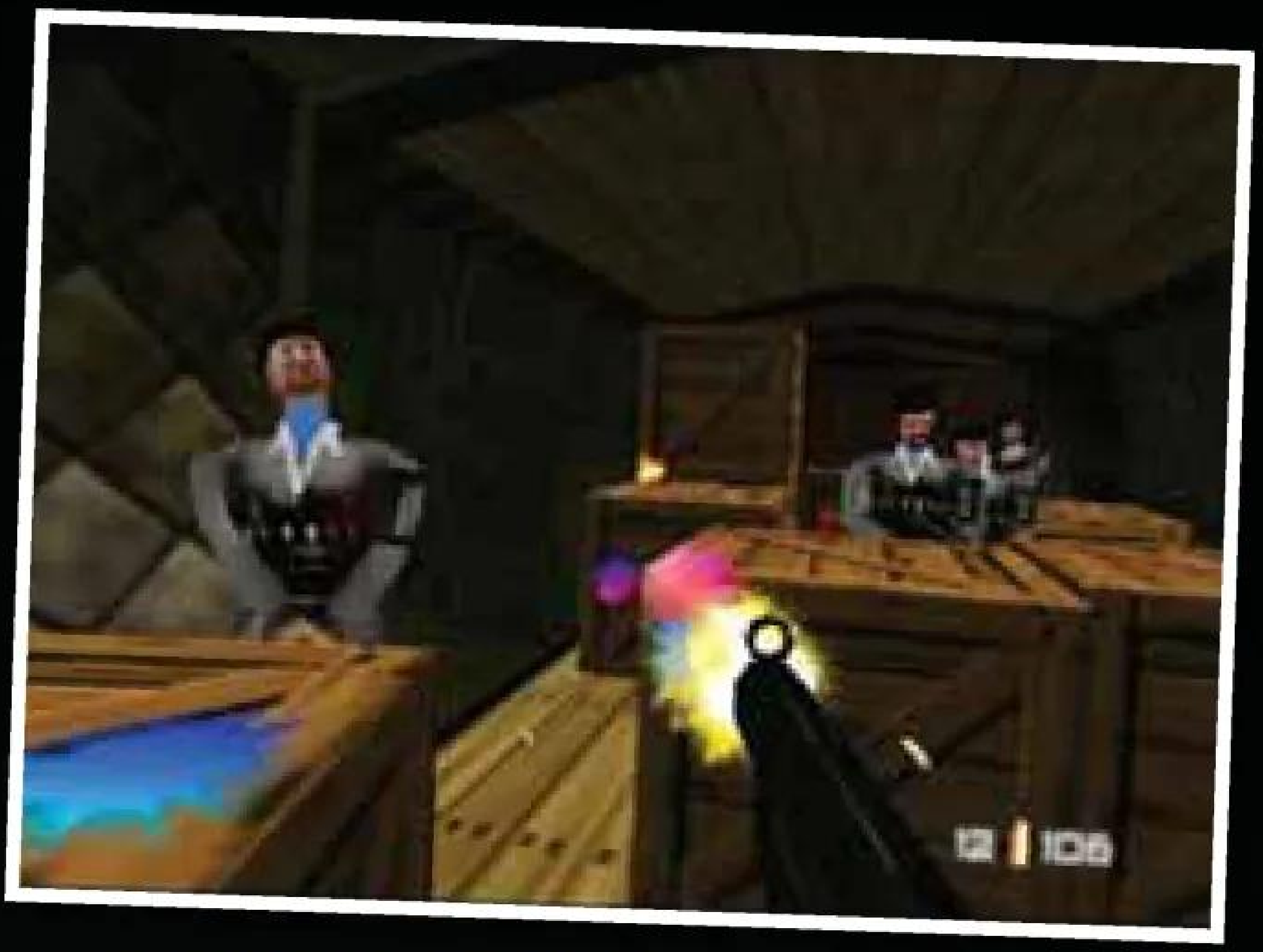
"THE OUTSIDE BUILDINGS ARE NOT REAL BUILDINGS. THEY WERE ABOUT AN EIGHTH SCALE MODEL DIORAMA BUILT OUT ON THE RUNWAY AT LEAVESDEN. THE MOUNTAINS WERE A HAND-PAINTED FLAT BACKGROUND PANEL. THE DARK PATH CROSSING THE FOREGROUND WAS AN ACCESS GAP THAT THE MODELLERS COULD USE TO REACH INTO THE CENTRE OF THE MODEL. THE SKY IS DEFINITELY REAL. THIS SET WAS USED FOR THE SCENE WHERE THE MIG FIGHTER CRASHES INTO THE SEVERNAYA COMPLEX AND BLOWS UP THE DISH AFTER THE FIRST GOLDENEYE IS SET OFF."





CHEAT MASTER

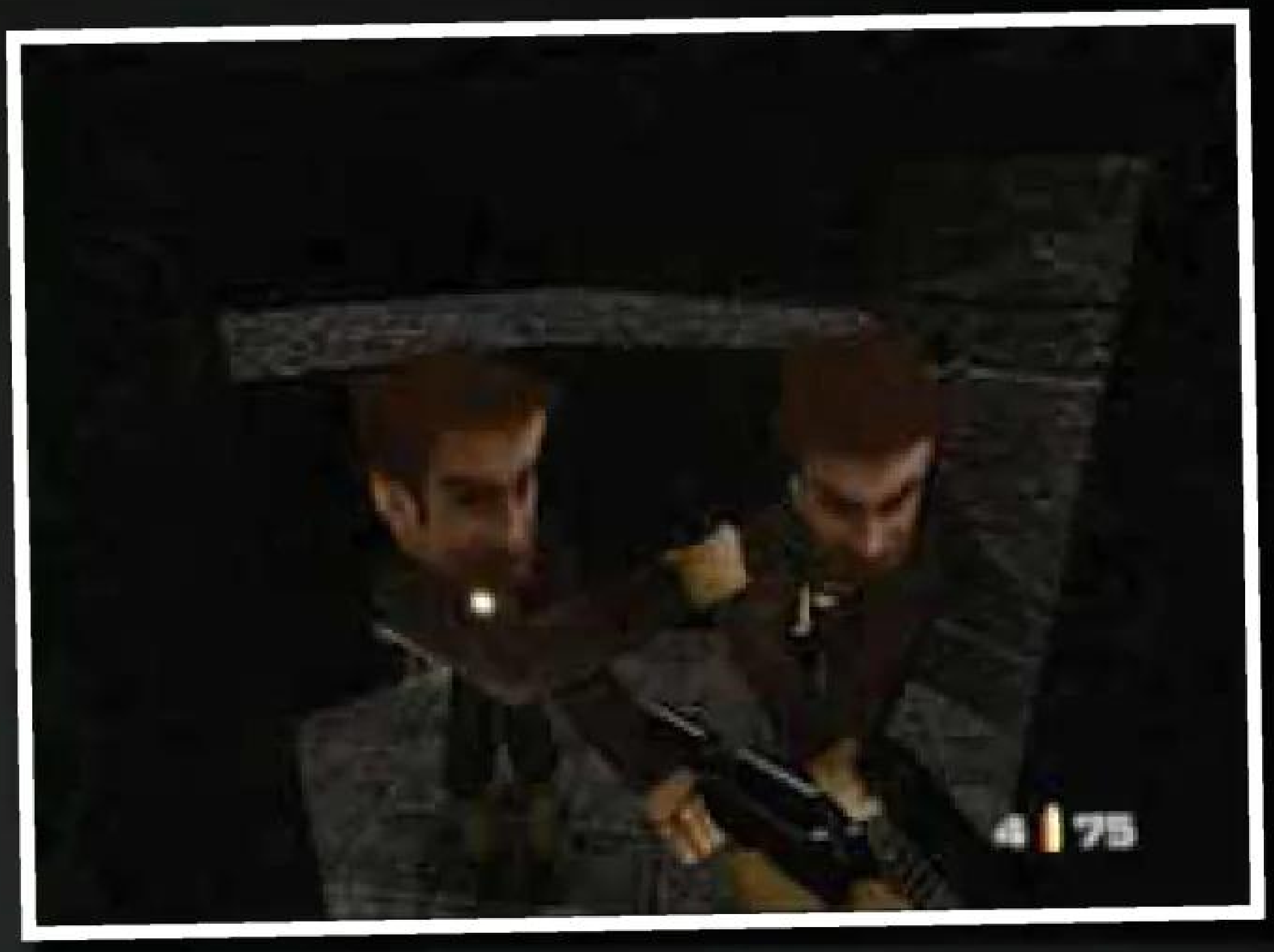
THE BEST GOLDENEYE CHEATS, AND HOW TO UNLOCK THEM



PAINTBALL MODE

■ This aesthetic option swaps out all the bullet holes in the game for lovely splotches of brightly coloured paint. Unfortunately it doesn't affect characters so you can't paint enemies with it.

UNLOCK IT BY: Speed your way through the Dam level on Secret Agent mode in 2:40 or under.



DK MODE

■ This insanely easy-to-unlock cheat distorts all the character models to give them giant heads, tiny bodies and oversized arms. Needless to say it makes it very easy to get headshots with it activated.

UNLOCK IT BY: Finishing the Runway stage in less than five minutes. Even Boris could do that.

INVINCIBLE

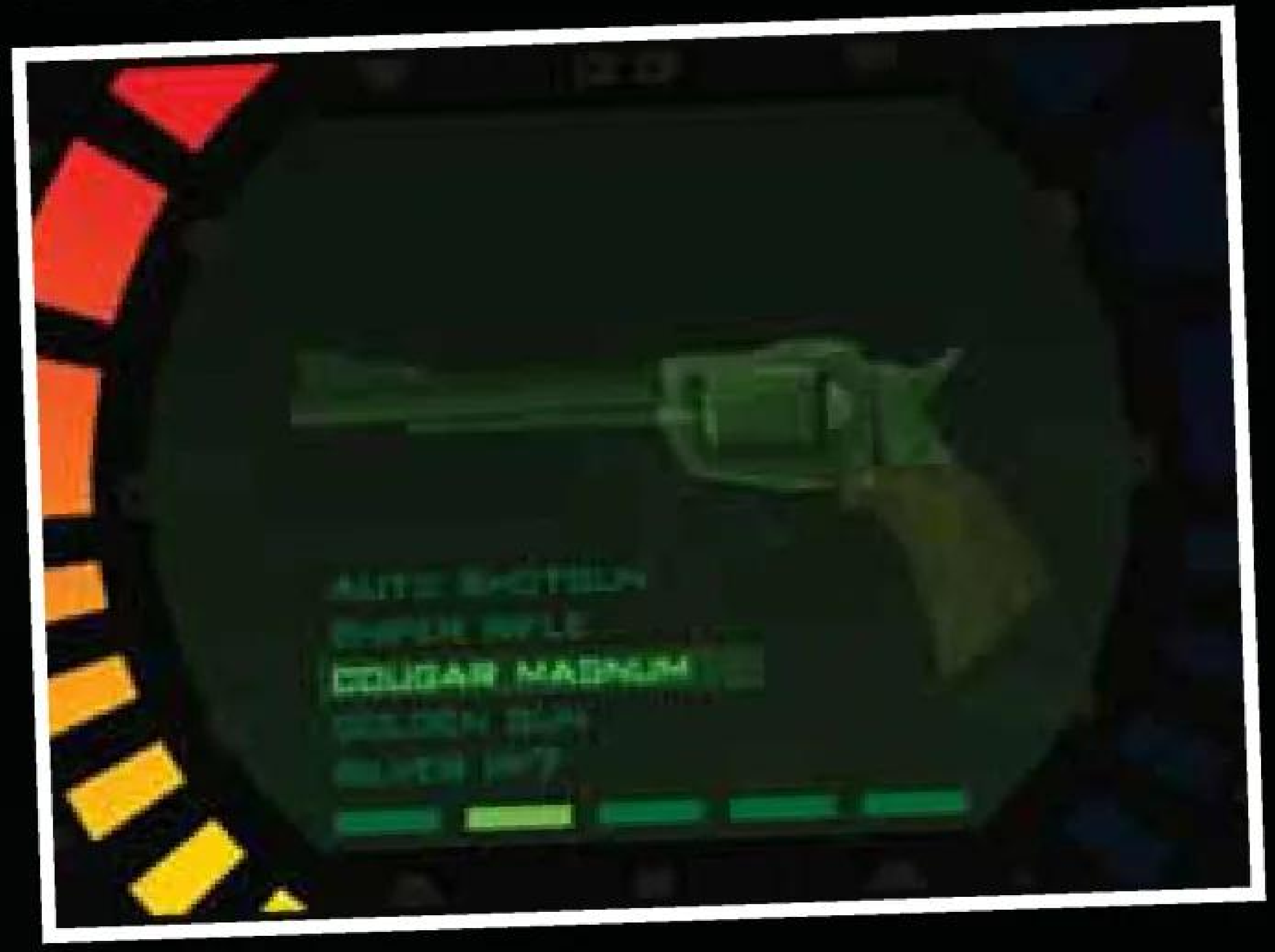
■ *GoldenEye* can be pretty tough and some of the later stages are phenomenally hard. Take away some of the pain by making James Bond invincible to everything in the game.

UNLOCK IT BY: Get through Facility on 00 Agent mode in 2:05 minutes or under.

ALL GUNS

■ Why would you not want access to every gun in the game? Of course you would. You can even access the tank using this. Just be aware that weapons won't come with any ammo.

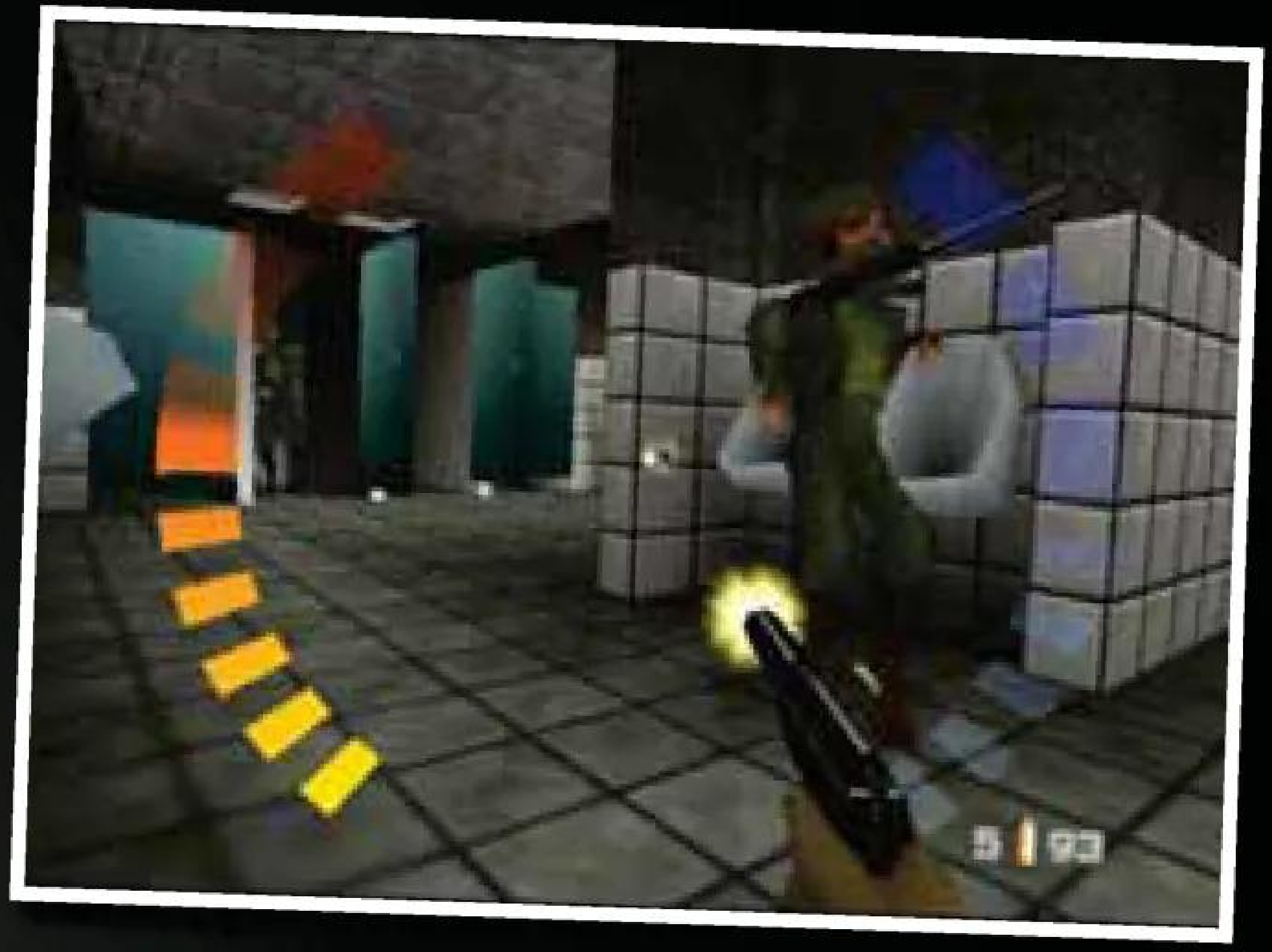
UNLOCK IT BY: Complete Egyptian on 00 Agent difficulty in six minutes or under.



TINY BOND

■ This nifty cheat shrinks you to half your usual size. While the viewpoint does take a while to get used to, it does mean that all enemies find it very hard to hit you. Use this to your advantage.

UNLOCK IT BY: Blast your way through Surface 2 on 00 Agent mode in 4:15 or under.



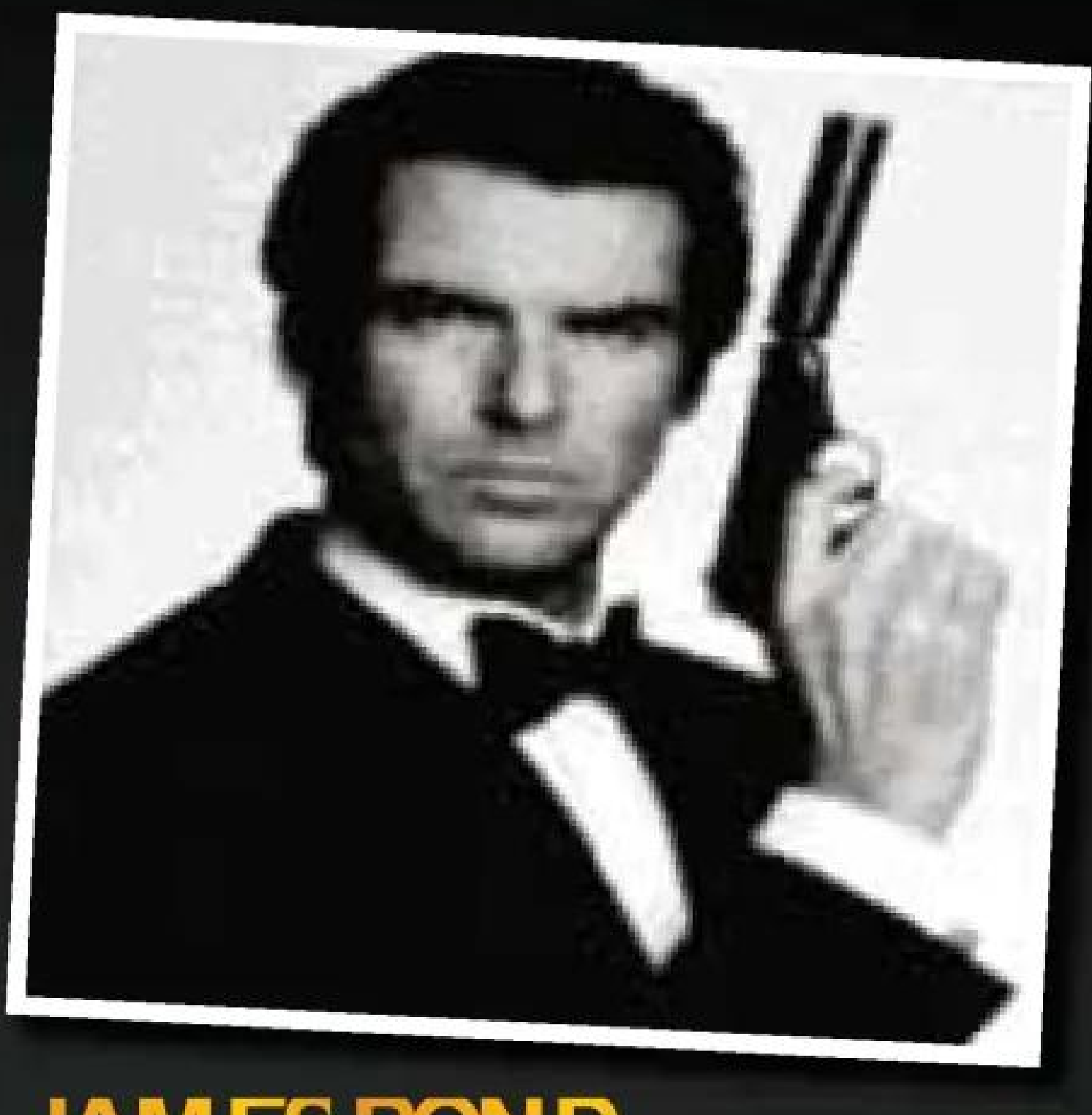
TURBO MODE

■ Make things a little easier for yourself by greatly increasing Bond's mobility, which should make it a lot simpler to escape guards and get yourself out of tricky situations. It does take a while to master, though, so persevere with it.

UNLOCK IT BY: Finish Silo using Agent mode in 3:00 or less.

HEROES AND VILLAINS

MEET THE CAST OF GOLDENEYE



JAMES BOND

■ *GoldenEye*'s protagonist is tasked with preventing Janus from firing the *GoldenEye* satellite. Pierce Brosman plays the iconic role and would do for a further three films.

NATALYA SIMONOVA

■ This hacker ends up accompanying Bond on several missions after they encounter each other as prisoners. Izabella Scorupco depicts her in the film.

ALEC TREVELYAN

■ You first meet 006 during the second mission, but see him executed by Colonel Ourumov. Bond soon discovers he's survived and is Janus. He's played by Sean Bean.

XENIA ONATOPP

■ Mercenary Xenia is incredibly dangerous and likes to kill men by squeezing them to death between her thighs. In the film she's played by Famke Janssen.

GENERAL ARKADY OURUMOV

■ The rogue Russian general is a thorn in Bond's side for most of the Arkangelsk missions. He's played by Gottfried John.

BORIS GRISHENKO

■ "Invincible" computer hacker Boris trips an alarm in Bond's first encounter with him and then pulls a gun on the secret agent. He's played by Alan Cumming.

VALENTIN ZUKOVSKY

■ This Russian gangster helps James Bond out in a couple of levels, as he doesn't want Janus muscling in on his territory. He's played in the movie by Robbie Coltrane.

DIMITRI MISHKIN

■ Mishkin captures Bond and takes him to the Archives level. He eventually admits that he knows Bond isn't a traitor and helps him. He's portrayed by Tchéky Karyo.

ON HER MAJESTY'S MO-CAP SERVICE

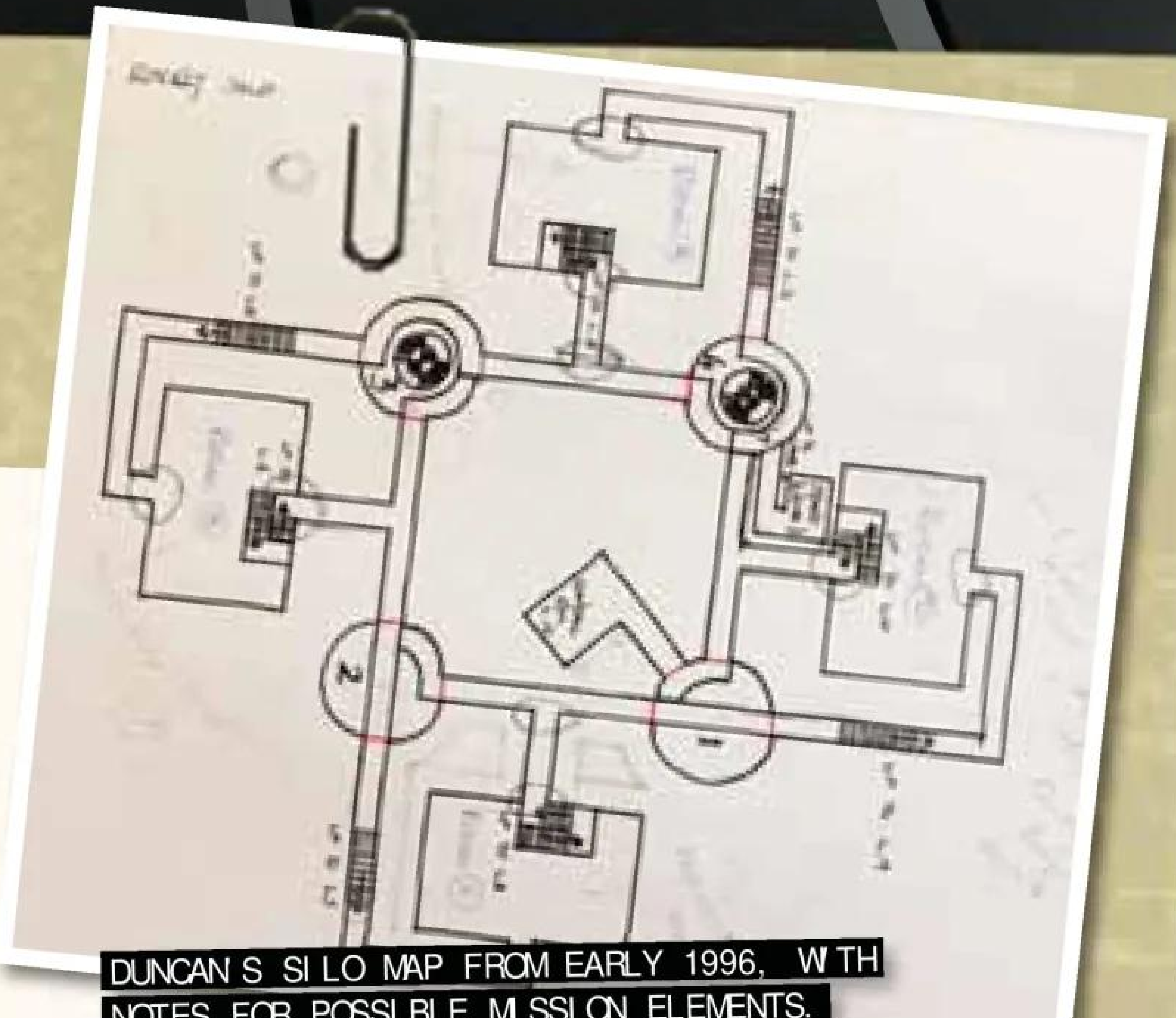
DUNCAN BOTWOOD ON FALLING OVER A LOT

"I often say, 'I died a thousand times for *GoldenEye 007*'," says Duncan Botwood, whose dedication to making the game the best it could be involved physical as well as mental strength. On top of his role as game designer, shaping mission structure as well as the layout of levels, he became the reference model for the various agonising reactions when enemies took a hit. "Motion Capture data was good at picking up very human movements like flinching, and you could easily tell the difference between me throwing myself on the floor versus me being pushed to the floor. So I had to stand in position with my eyes shut so I didn't flinch, and B [Jones] would walk quietly up to me and shove me hard to make me fall over. Multiply that by eight per position because of covering all the angles and you get a full coverage of animations… and bruises."

Duncan, who stayed at Rare until the end of the Noughties and now works for Ubisoft in Canada, assures us it was worth the pain. "I'm sure *GoldenEye* has opened doors for me, though my favourite part has been people coming up to me at work saying they played it at college with their friends, or at home with their family, and loved it. It's great to know that people had such a positive experience and I never tire of hearing it."

He also mentions he specifically designed the Egyptian temple to have high ceilings because he liked using the grenade launcher trajectories to bounce grenades off the top of doors he was running through to take out people chasing him. Now there's a tip for your next deathmatch, folks!

DUNCAN BACKSTAGE AT E3 IN 1997.



DUNCAN'S SILO MAP FROM EARLY 1996, WITH NOTES FOR POSSIBLE MISSION ELEMENTS.

BEHIND THE IRON CURTAIN

WRITER DAVID DOAK ON GOLDENEYE'S LEVEL DESIGN

David Doak smiles rather proudly when we ask him about the legacy of his innovative work on mission design and enemy AI for *GoldenEye*. "My favourite moment was meeting the original Valve guys at ECTS, a UK trade show, in 1998 and them joking that *GoldenEye* had forced them to redo a bunch of stuff on *Half-Life*. They went on to do all right."

When David joined the team in late 1995, plenty of the basic gameplay was in place. The controls were responsive, the core loop of 'encounter enemy, shoot them, move to next' worked efficiently and the audio and visuals gave solid feedback. "The obvious issue was that levels were fairly barebones," he explains. "They had been constructed to test gameplay, though even at this stage, there were innovative features which staked out the ambitions for the game, like the alarm system in Severnaya Bunker. It could be triggered by a guard who ran to press a big red button or set off by the cameras 'seeing' Bond. The FPS paradigm of the day was *Doom*, which had you shooting monsters and collecting coloured keys to open doors and we really wanted to step away from that."

Though David acknowledges that at its most basic, this involved reskinning the 'keycard' concept with decoders, covert modems and all manner of gadgetry, he was determined to vary the pace and rhythm of levels. "Severnaya Bunker 1 has a lovely, juicy density to it," he enthuses, "a very simple, small space but, particularly on higher difficulties, there is a lot to do with juggling objectives, alarms and enemies. The Bunker 2 cell escape was pleasing to set up; the stealth came together well and was something that felt fresh, in a pre-*Metal Gear Solid* and *Thief* world. And obviously Facility is a continuing source of chuckles that Dr Doak is in there…"

Yes, David makes a prominent cameo as the scientist/secret agent, though most of the team are featured somewhere in the game, whether as the faces of nameless guards or doing silly turns on computer monitors. Despite being satisfied with the variety of mission goals and interesting level design the team achieved, David is the first to admit not everything they tried quite came off. "Some level setups were exercises in damage limitation. For the more open levels like Runway and Depot, it was hard to construct meaningful gameplay and the results are patchy. And the Escort missions seemed like a good idea at the time. I mean, what could possibly be more fun that having your performance judged on whether Natalya would randomly throw her head in the path of a bullet or walk into an explosion?"

Notwithstanding a few misfires, the story mode was groundbreaking in offering the player choices. Should you go in with all golden guns blazing or use your license to kill sparingly? Guards could be sneaked past but how satisfying it proved to take out goons with a flurry of headshots. The way your foes responded to your actions and the surprising, sometimes exasperating, interventions of NPCs all created the sense that this was a living, bleeding world.

"Refining the AI was largely a process of brokering deals with Mark Edmonds," says David. "I'd make my case that a feature would allow me to script a more interesting setup, Mark would shake his head, explain how it wasn't possible then go back to his desk and do some coding wizardry to make it happen. Legend."

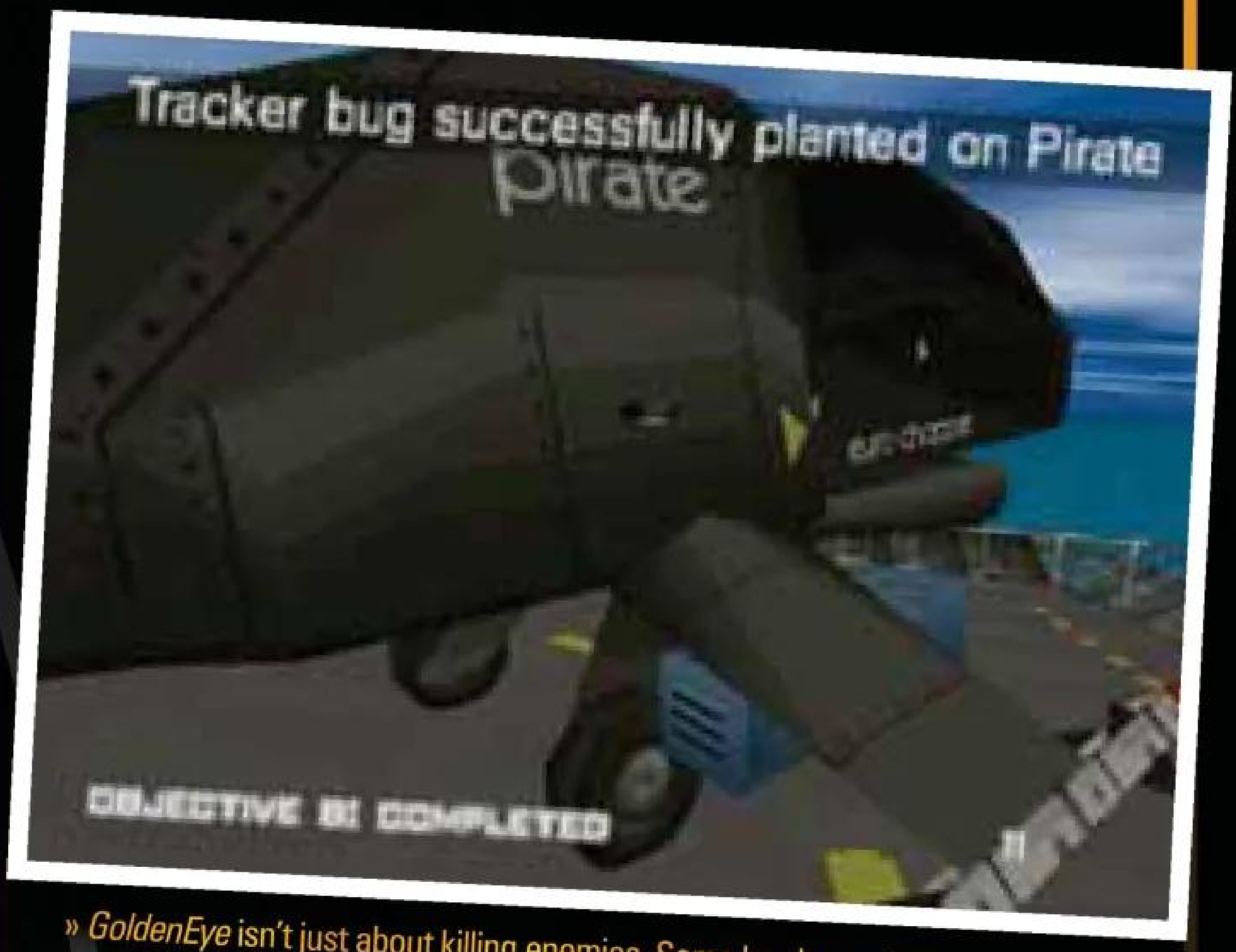
"SEVERNAYA BUNKER 1 HAS A LOVELY, JUICY DENSITY TO IT"

David Doak

» You can cause all sorts of wanton destruction and if you're lucky, you might damage someone, too.

GOLDENEYE 007

» David showboats on his own work at E3 in 1997.



Tracker bug successfully planted on Pirate

OBJECTIVE B: COMPLETED

» *GoldenEye* isn't just about killing enemies. Some levels require you to bug things. And also require you to kill enemies…

LOCATION, LOCATION

JETTING AROUND THE WORLD WITH BOND

SEVERNAYA

SURFACE 1

■ This tough level requires Bond to make his way into a satellite control bunker. It's tricky as there's lots of open ground and very little cover.

BUNKER 1

■ You're still stuck in Siberia and have to navigate this underground base. Fortunately it's still being built and not heavily armed.

SURFACE 2

■ The eighth stage sees you returning to Severnaya and it's a tough one. It's hard to see where you are and there are guards everywhere.

BUNKER 2

■ You start this stage holed up in jail next to Natalaya. This is a tough stage as you need to keep her safe whilst retrieving several items.

DRESSED TO KILL

B JONES ON KEEPING THE STYLE AND DESIGN AUTHENTIC FOR GOLDENEYE

LOCATION, LOCATION

JETTING AROUND THE WORLD WITH BOND

KIRGHIZSTAN

SILO

■ This is a tough stage, as you have to navigate bland-looking environments and plant explosives in all the fuel rooms.

MONTE CARLO

FRIGATE

■ Bond's stop in Monte Carlo is so he can plant a bug on a very dangerous helicopter. Unfortunately it's stashed away on an armoured ship.

MEXICO

TEOTIHUACAN

■ Congratulations, you've reached one of the secret levels of the game, which is based on the classic Bond film, *Moonraker*.

EL-SAGHIRA

■ This stage is only unlocked after completing all the other levels on 00 Agent setting. You need to grab the Golden Gun and stop Baron Samedi.

On the *GoldenEye* credits, B Jones role is listed as 'costume designer'. It might be a tongue-in-cheek reference to the world of film, but it proved surprisingly apt as no one is more adept at fashioning a pixel tuxedo than she is. "We originally had three other Bonds in the game," she explains. "I had to make different tuxedo textures within a 64x32 pixel texture. Moore got the white one with the carnation, Dalton got the double breasted and Connery got the classic Sixties tux. And all their faces came from my reference books."

With no handy internet libraries to consult in the mid-Nineties, much of the look of *GoldenEye* came from B's extensive collection of *Bond* books and memorabilia. Character photos were scanned, gadget manuals were carefully studied and lunchtimes were spent watching the *Bond* back-catalogue on videotape. "We only had a half hour break so we'd get through them in 20 minute segments and it took ages," she laughs.

» They don't appear as often as we'd like, but you do get to play around with the odd *Bond* gadget.

> **'We originally had three other Bonds in the game'**
>
> B Jones

The team did have some access to the film set and lugged their swanky new digital camera to Leavesden Studios in Hertfordshire to photograph as much as they could. "That camera was huge, really heavy and cost about two grand," she remembers, "but it was how we got most of our reference material, like for Statue Park and inside the main Archanglsk complex both before and after it was blown up. I used that same camera to take the photos of faces we used in the game. I would take front, side and back of the head shots and stitch them together. This was before Photoshop so all I had was this pixel painter called NinGen and just 38x32 pixels for the textures. You try drawing any believable human face in that!"

Two decades on and it's quite easy to raise a Roger Moore-esque eyebrow at the blocky heads in the game but at the time, this was pioneering work, as was the use of motion-capture to give character movement a sense of realism. The initial setup was a 'flock of birds' magnetic system in which all of the markers on the body were directly attached to the computer by cables. "The capturing unit was mounted halfway up one wall and you had to be quite careful with the moves or else it would come flying off the wall and hit the performer," she winces.

Perhaps the most effective use of this new technology was in making your foes look like you'd really slugged them. Shoot them in the shoulder and they would recoil in pain; shoot them in the head and they'd crumple to the floor. "We wanted the animations to look like the victim wasn't expecting it, so we got [team member] Duncan Bottwood to close his eyes and I'd suddenly slap him on the shoulder without telling him. We didn't want that split second of bracing to be visible in the capture. We even had ropes tied around his waist to pull him off his feet. We had plenty of soft mats around but I don't think we could have got away with it in today's health and safety-conscious environment..."

It was this attention to detail in every aspect of *GoldenEye*'s visuals that helped make the game so immersive. Since leaving Rare, B has worked in film and TV, including credits on *Doctor Who* and *Guardians Of The Galaxy*, but still keeps in touch with her old coding buddies. We wonder if she ever felt conscious of being the only woman on the team or if gender stereotypes ever got in the way? "No and no, and clearly you don't know me," she replies, bluntly.

» Steve and B accept the accolades at E3 in 1998.

» Some levels will end early if you kill civilians that you're not supposed to.

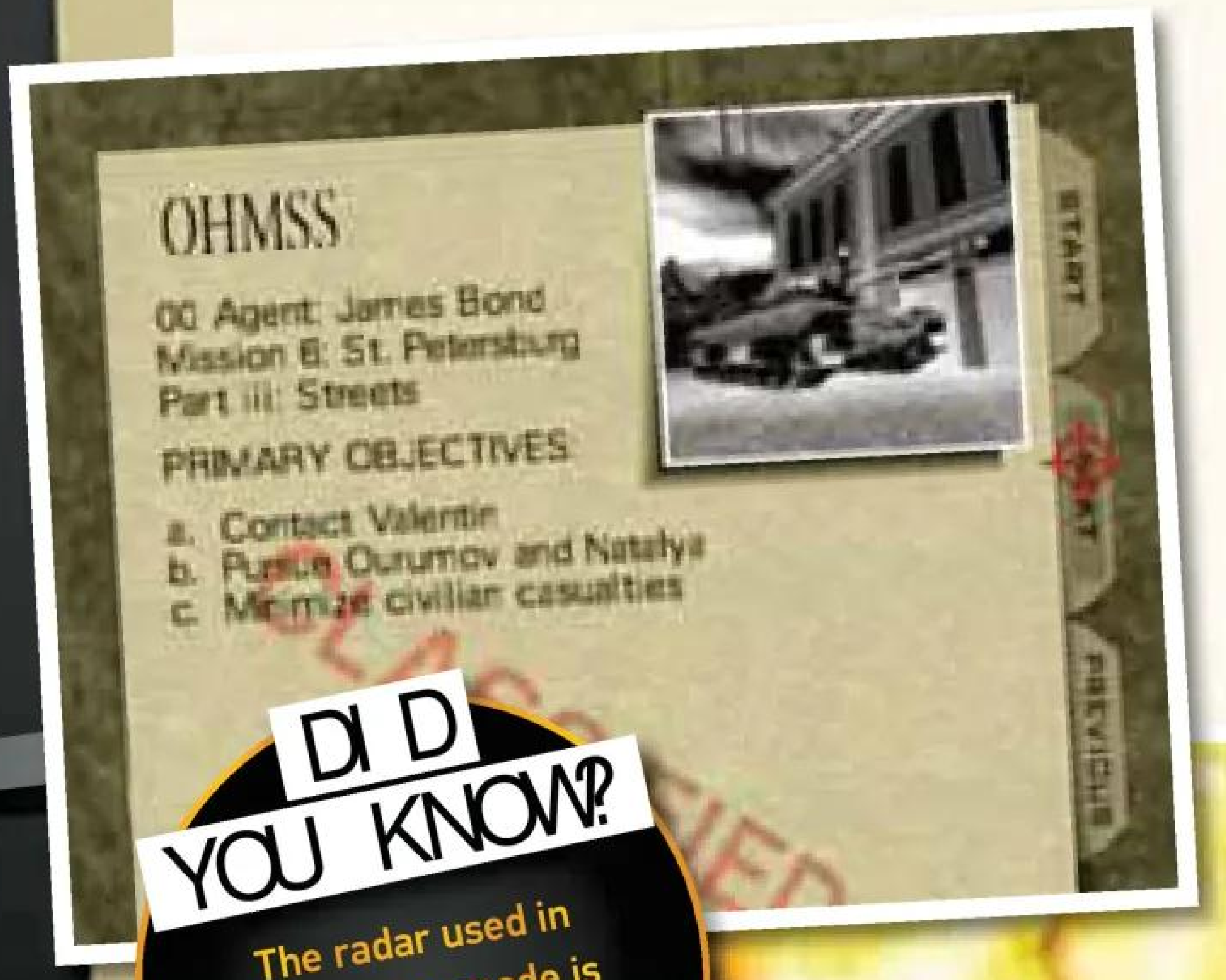
THE SOUND OF GOLDENEYE

WITH GRAEME NORGATE AND GRANT KIRKHOPE

When you joined the *GoldenEye* team did you think, 'This is the easiest gig in the world we just need to do a version of the theme tune!'?

GN: It was certainly a massive headstart having the *Bond* theme to play around with, but I never thought it was going to be an easy ride. A good theme played badly is still going to absolutely stink! I originally approached the music with more 'variations on the theme' rather than using segments of the theme itself, so tracks like the Train and the Depot are more in the style of *Bond* soundtracks. Then I thought to myself, 'Stop trying to be a clever dick and just use the flipping melodies!'

GK: Graeme asked me to work on *GoldenEye* with him as he was so busy with *Blast Corps*. I had a total love for *Bond* so getting to mess around with that iconic theme was the best thing ever!



OHMSS

00 Agent: James Bond
Mission 6: St. Petersburg
Part iii: Streets

PRIMARY OBJECTIVES

a. Contact Valentin
b. Pursue Ourumov and Natalya
c. Minimize civilian casualties

DID YOU KNOW?

The radar used in multiplayer mode is actually a texture for the oil drums featured in the game.

EVEN THE WEEDIEST WEAPON CAN CAUSE MASSIVE DAMAGE IF YOU USE IT TO SHOOT OIL DRUMS.

Were you at a disadvantage producing music for a cartridge game rather than a CD-based system?

GN: True, the N64 was the only console using cartridges at the time, and with CD you didn't have to worry about RAM limitations. But a cartridge system was more versatile compared to using CD back then, given that we wanted to give the game music some degree of interactivity. For instance, on the Severnaya Bunker level, if an alarm detects the player, the music changes. It's a simple change, but seamless. With a late Nineties CD system, the music would pause while the laser was seeking the appropriate track. A knackered disc or worn out machine and that could be a few seconds… you could have been killed in that time! Plus with a CD, you were limited to about 45 minutes for the soundtrack and we clocked up over two hours for *GoldenEye* in the end.

Let's get techy - what kind of tools were you using to produce the audio?

GK: I was using Cubase as my DAW (Digital Audio Workstation) and I got most of the sounds from a Roland JV 1080 and an EMU Proteus FX. I'd sample instruments and then squash them down as small as they could go without them sounding too horrendous and then get them into the N64 so I could use them.

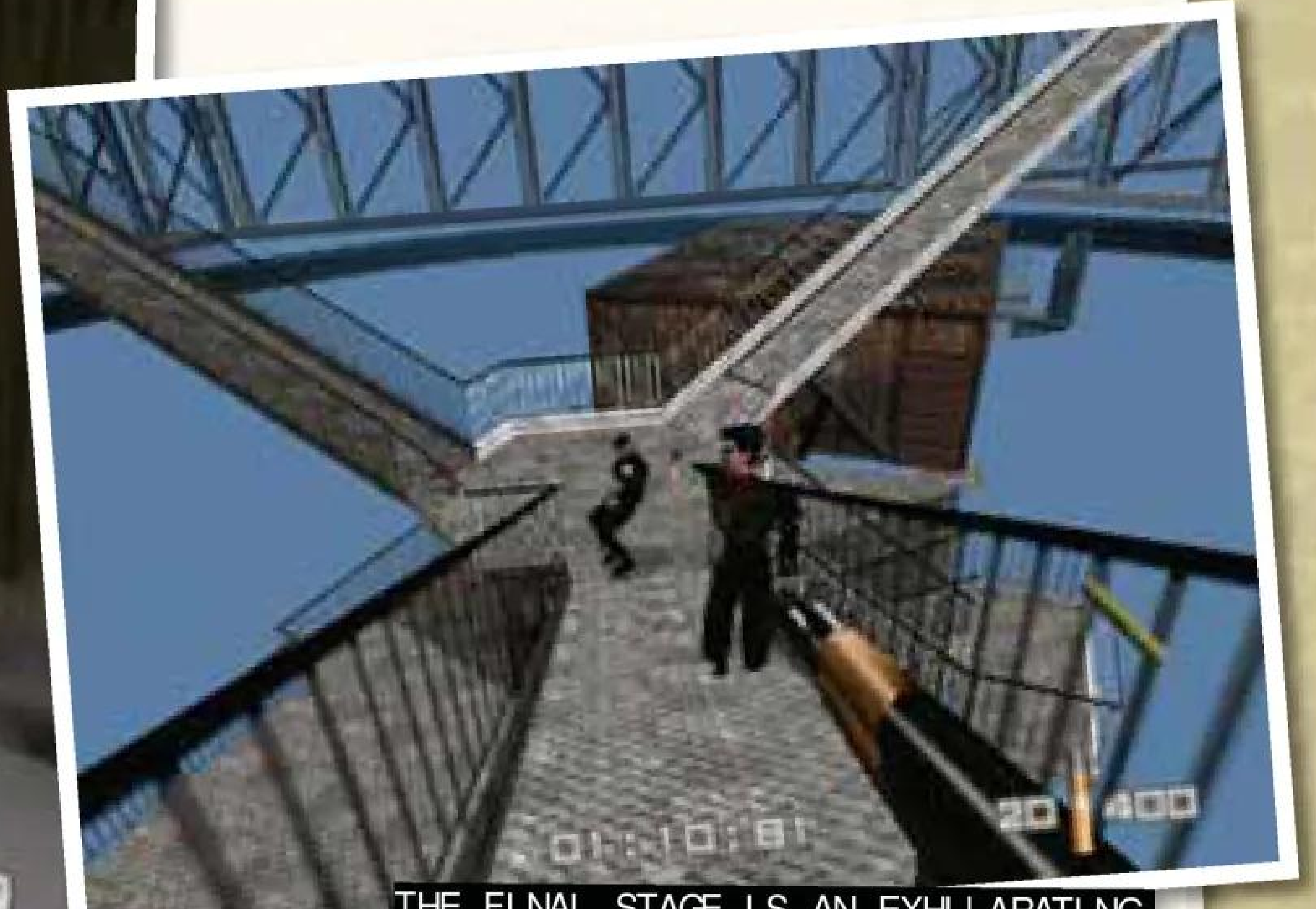
GN: For the first four months, I didn't have N64 hardware so I was writing using synths and samplers with the knowledge that the 'Ultra 64', as it was known then, would be able to play 100 sounds at once. The SNES only had eight sound channels so this was paradise. Or so I thought. Note to self: don't believe the hype. It was possible to play that many sounds as long as you didn't want to do anything else, like display graphics, so 12 to 16 simultaneous notes seemed to be a good compromise. After a couple of months of hard work by Rare's audio coder, we had noises coming out of the hardware.

SOME LEVELS LET YOU DUAL-WIELD. ALTERNATIVELY, CHEAT, THEN EVERY LEVEL OFFERS IT.

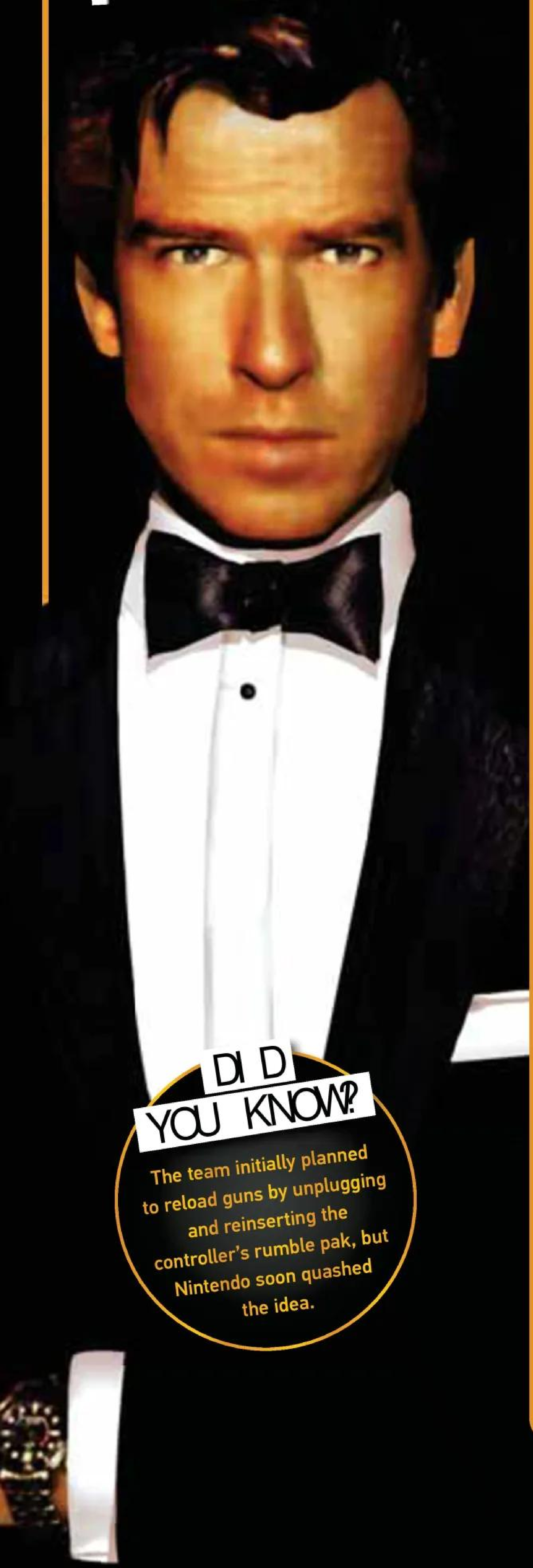
> "A CARTRIDGE SYSTEM WAS MORE VERSATILE COMPARED TO USING CD"
>
> Graeme Norgate

Audio can sometimes be an afterthought when developing a game...

GK: Not in the eyes of the people at Rare. All the composers were really pushed to write the best music they could. Tim Stamper was particularly on the case when it came to music. He was always asking us to think of ways to make it better.

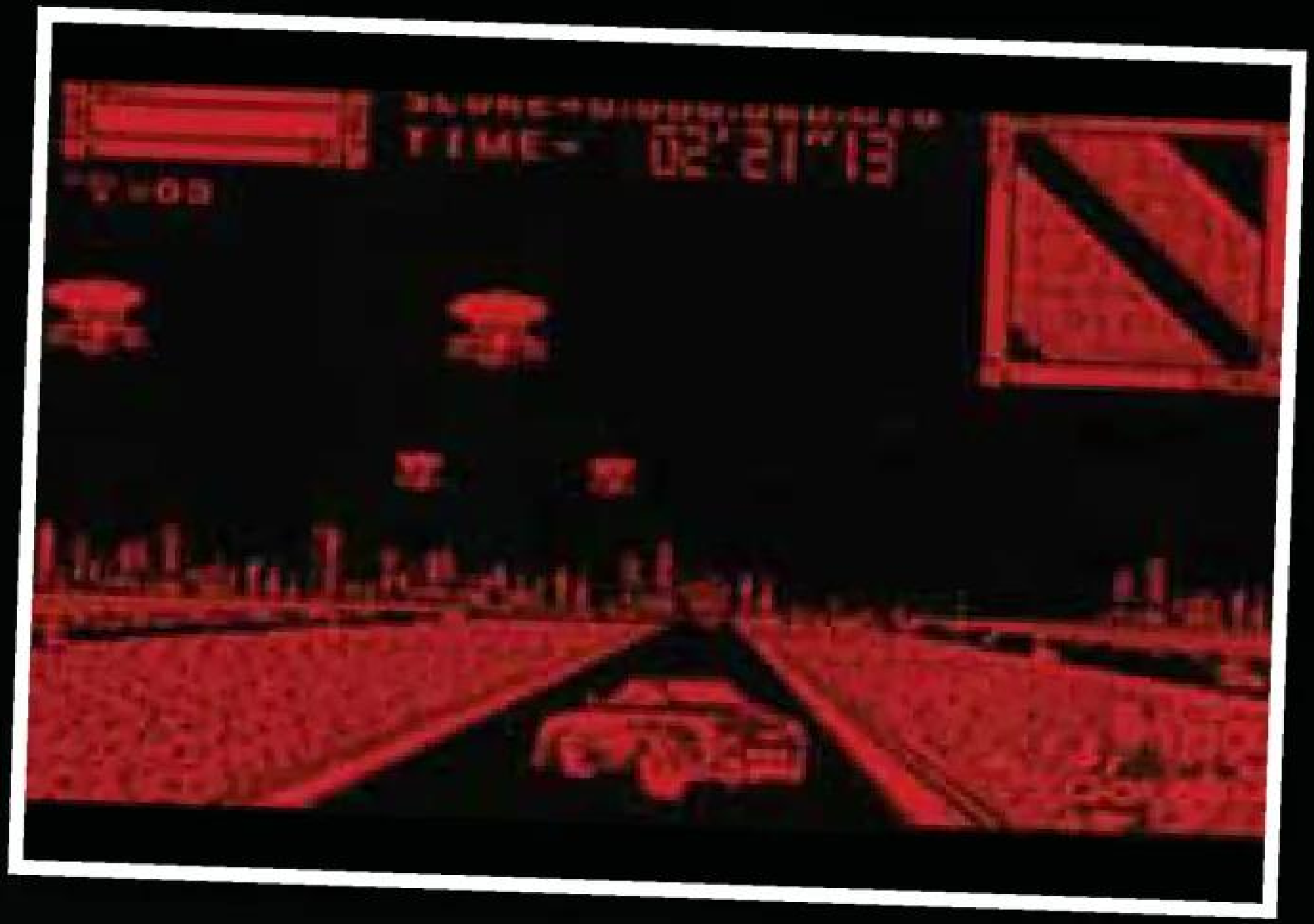


THE FINAL STAGE IS AN EXHILARATING CHASE AGAINST ALEX TREVELYAN.



RELOADING GOLDENEYE

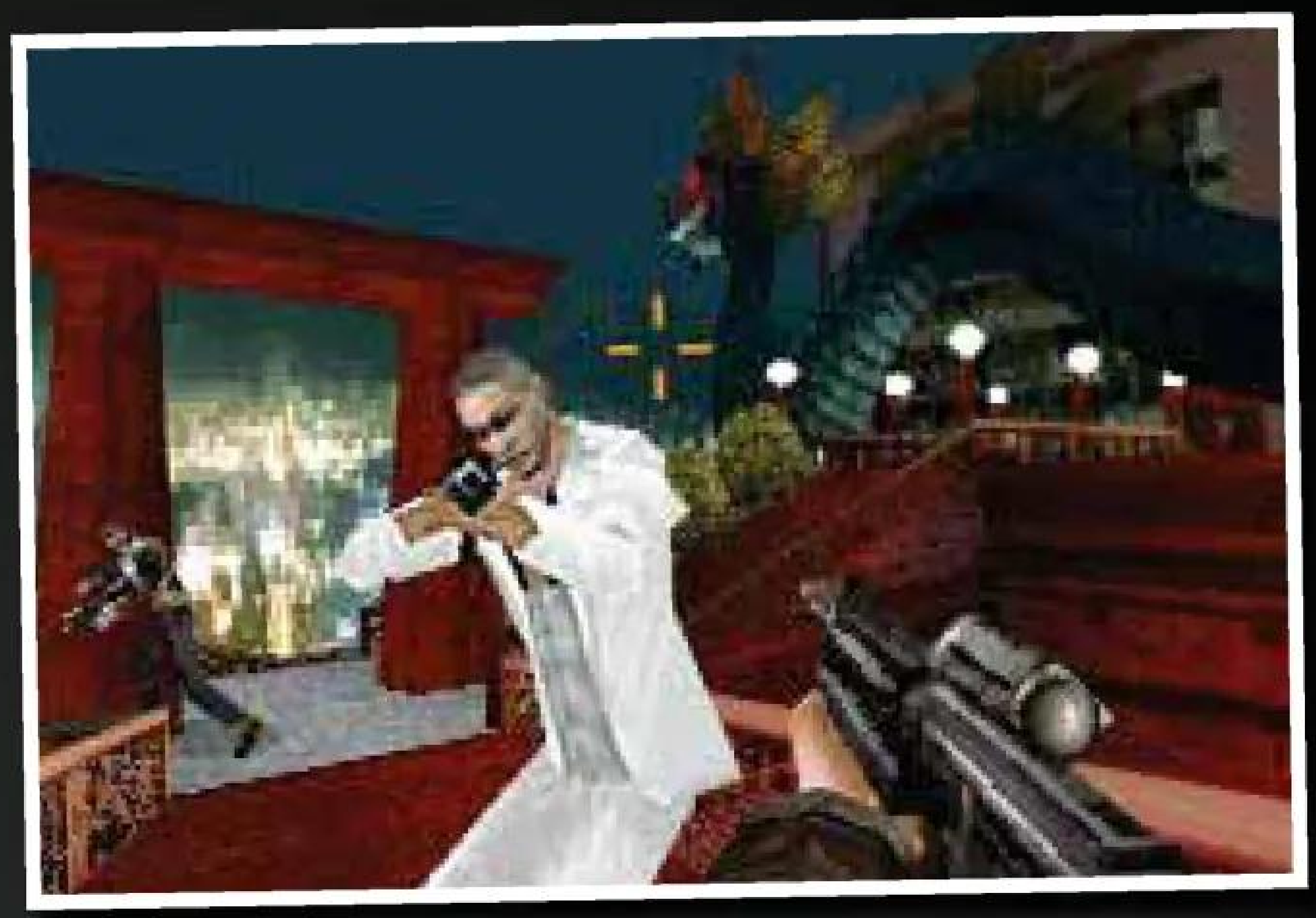
RARE'S SEMINAL SHOOTER HAD ITS FAIR SHARE OF SPINOFFS



GOLDENEYE 007

VIRTUAL BOY

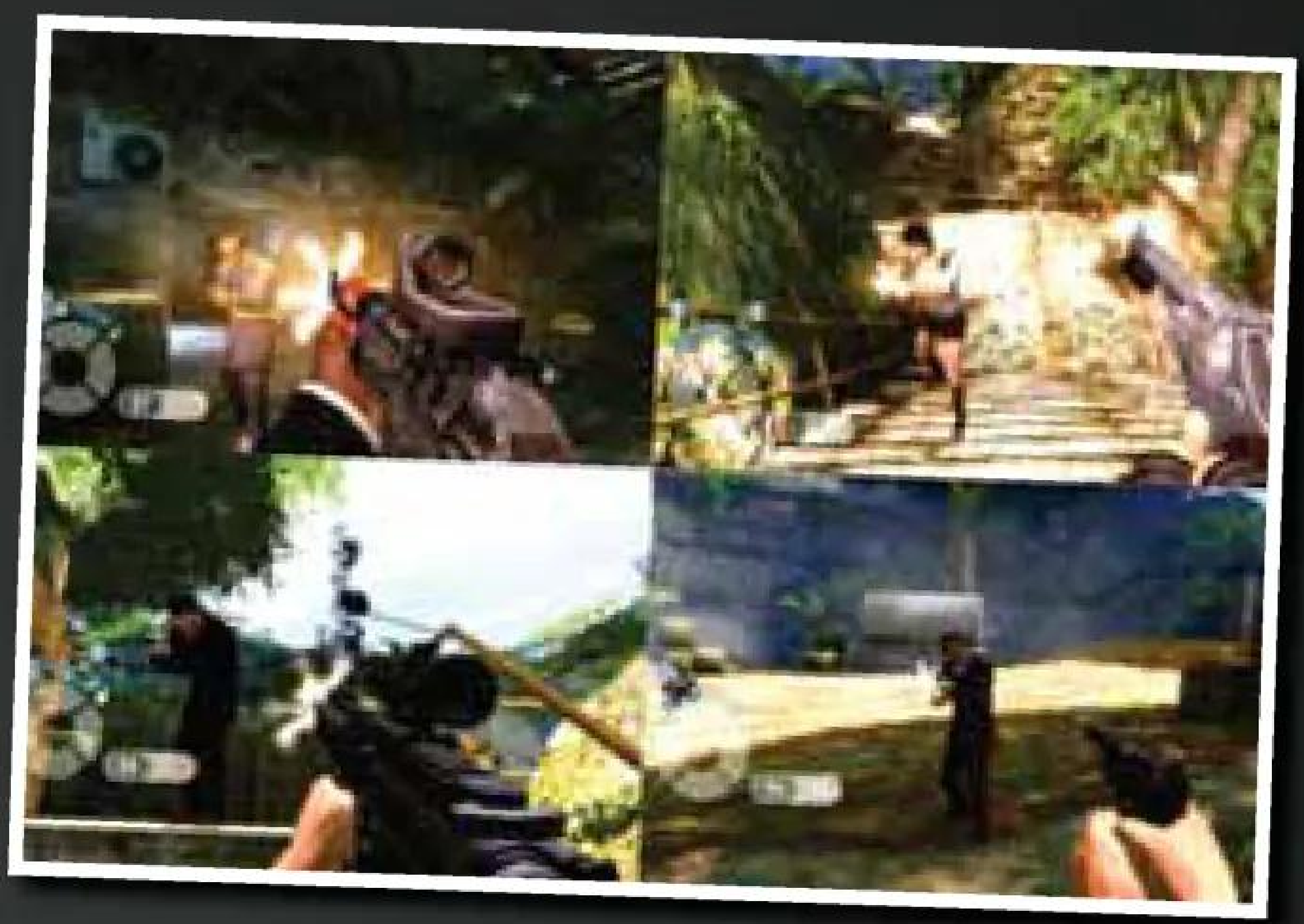
■ There's little info on this canned Virtual Boy game. Not even the name of its publisher. Based on the information available at Unseen64 it would have most likely been released before Rare's N64 hit (the last Virtual Boy game was released in 1996) and it sounds like a *Roadblasters*-inspired driving game.



GOLDENEYE: ROGUE AGENT

NINTENDO DS

■ While this is effectively a massively cut-down version of the home console game it's nevertheless different enough to deserve its own separate entry. This was one of the first first-person shooters to be released on the console and it's surprisingly decent to play, too, utilising a similar control system to the *Metroid Prime Hunters*.



GOLDENEYE 007 RELOADED

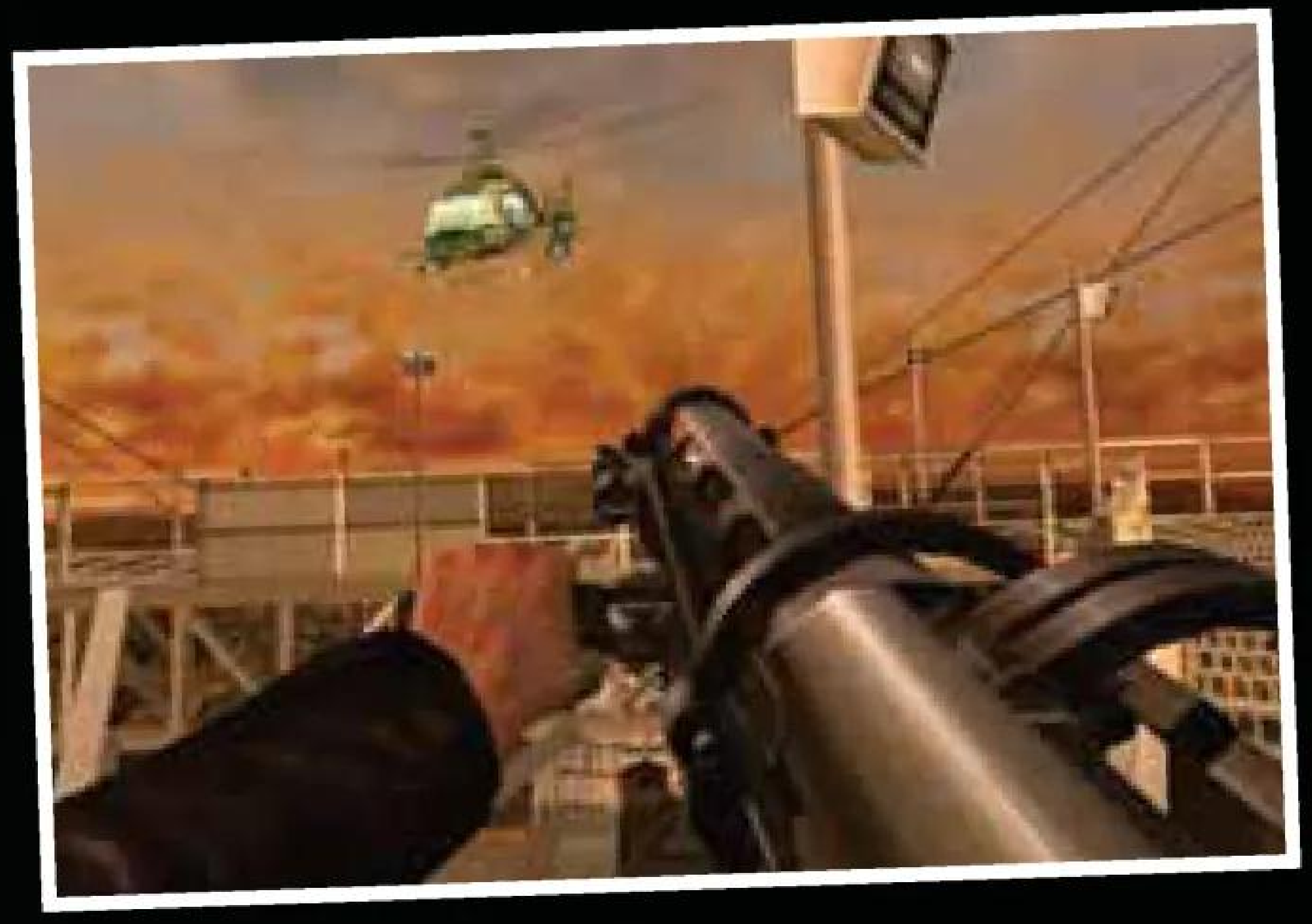
PS3, XBOX 360

■ The success of Activision's Wii game meant it received a HD port to the HD consoles of the time. The most obvious change to the game is enhanced graphics, but changes have been made elsewhere as well. There's also a new M16 mode, which offers objective-based missions once the original story has been rinsed.

GOLDENEYE: ROGUE AGENT

XBOX, GAMECUBE, PS2

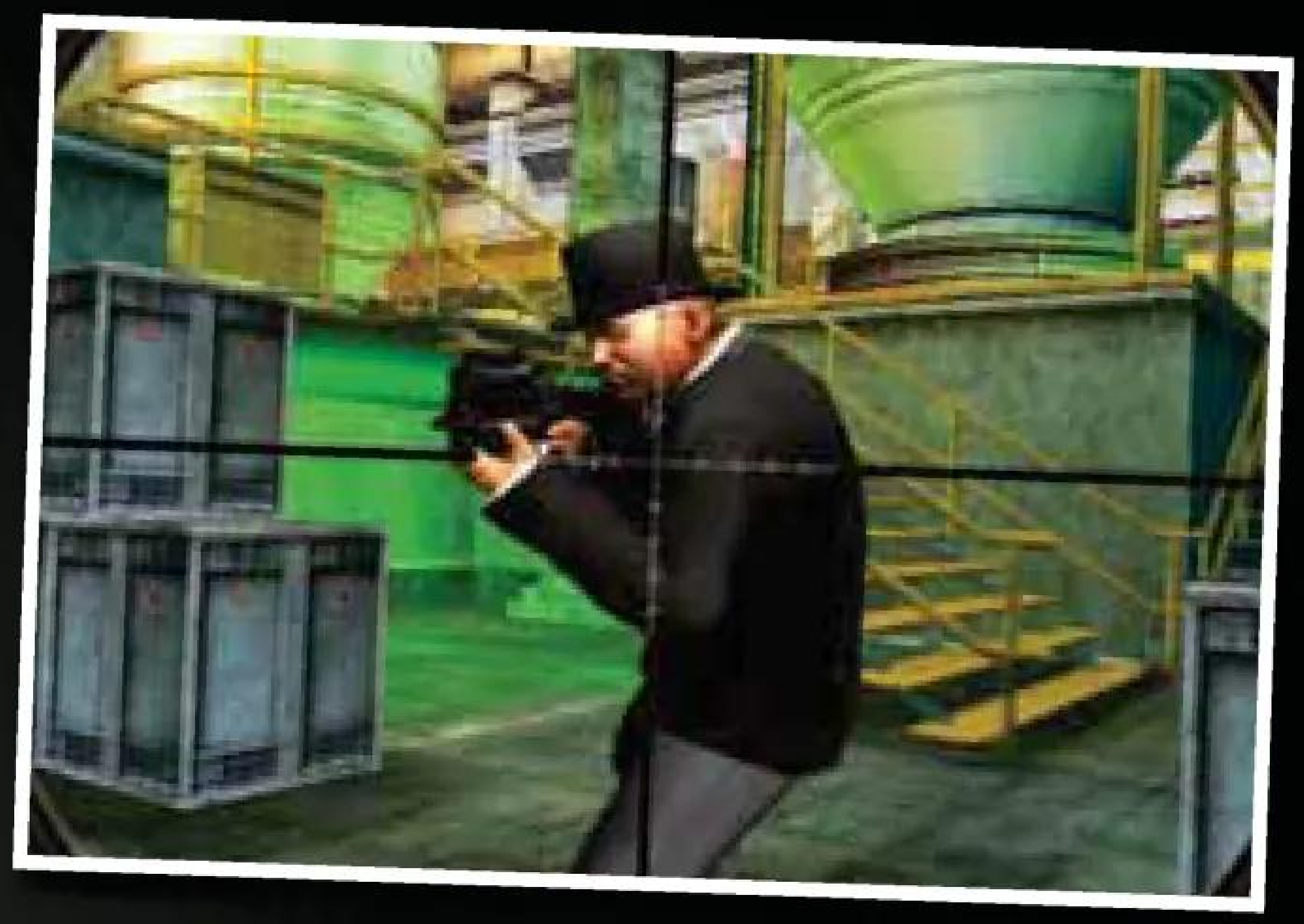
■ EA' previous three *Bond* games, *Agent Under Fire*, *Nightfire* and *Everything Or Nothing* had done well commercially and this was a 'sequel' to the greatest *Bond* game of all time. What could go wrong? Well everything really. It was incredibly weak, with mechanics largely revolving around the abilities of your agent's *literal golden eye.*



GOLDENEYE 007

WII

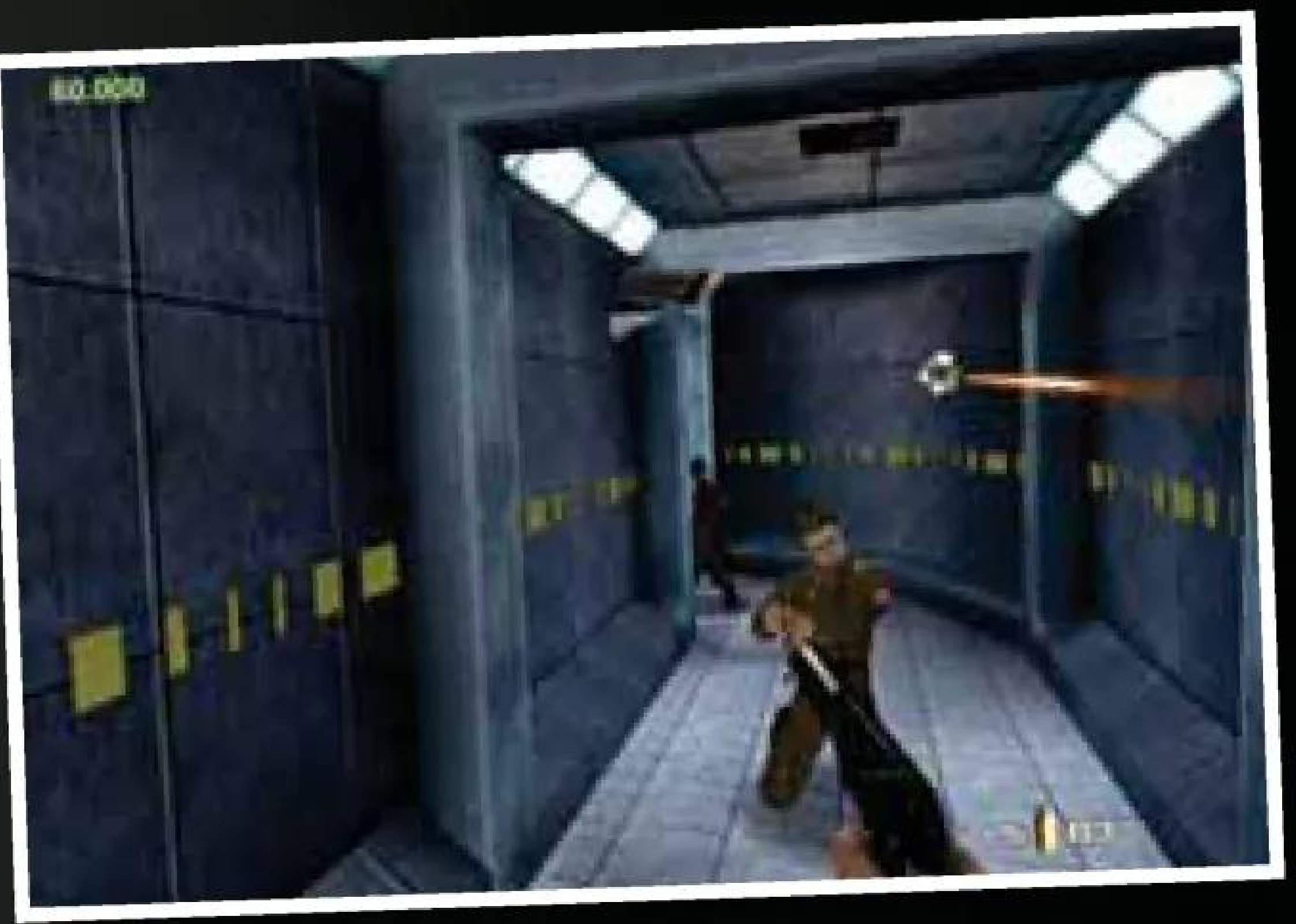
■ Activision's second Bond game remains the best-received game of its four releases. The biggest change is that Pierce Brosnan has been replaced with Daniel Craig. Mechanically it's been updated, too, taking into account more modern FPS tropes like regenerating health and destructible environments.



GOLDENEYE 007

XBOX 360

■ Ah, what could have been. News of a Xbox 360 version of *GoldenEye* first arrived in 2008 but then development stalled. It wasn't until 2016 that popular Rare source, Rare Thief uploaded 30 minutes of footage to YouTube, allowing gamers to see what would have most likely been the definitive version of Rare's hit game.



DID YOU KNOW?

The team initially planned to reload guns by unplugging and reinserting the controller's rumble pak, but Nintendo soon quashed the idea.

LICENCE TO THRILL

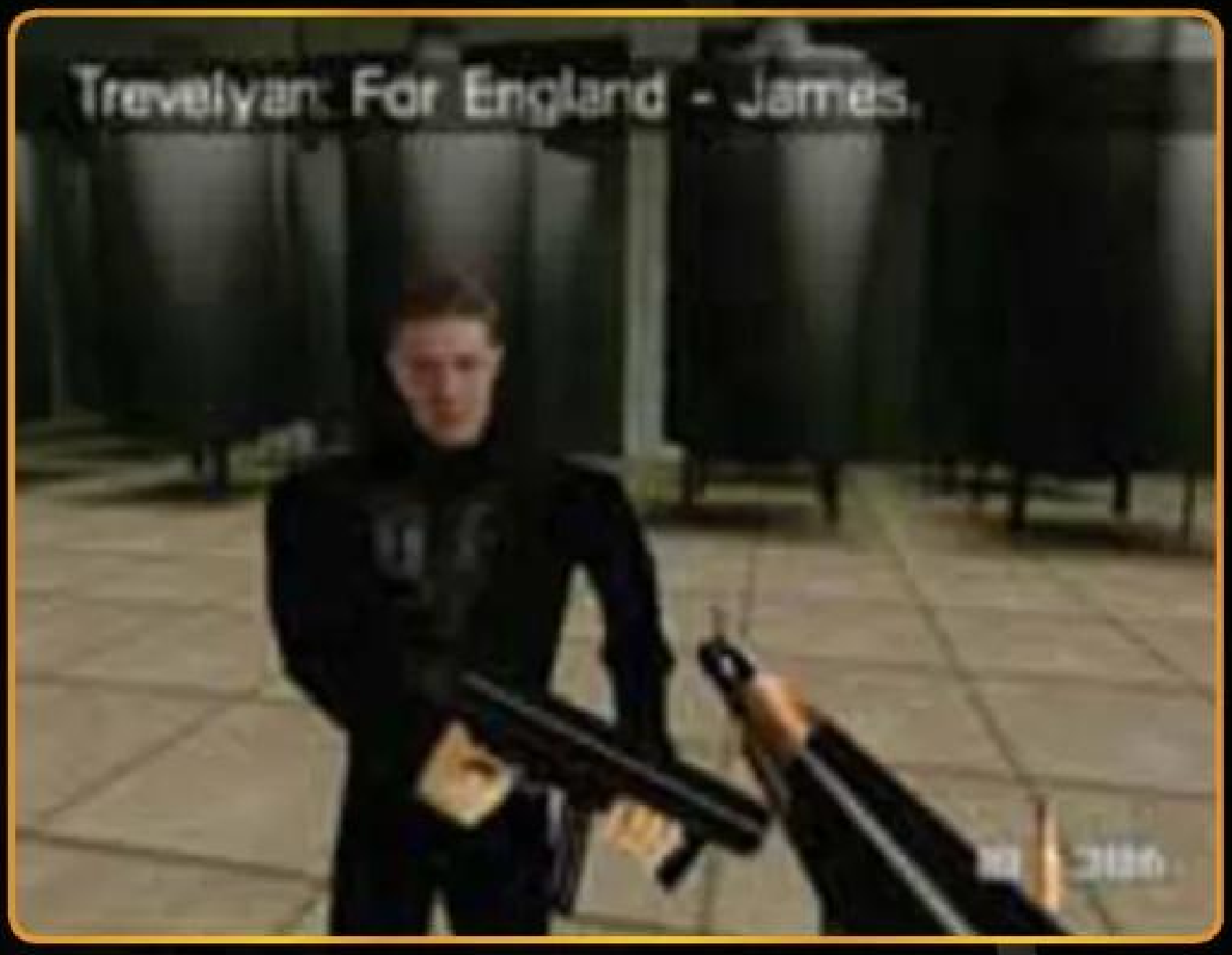
HOW RARE ADAPTED A BOND MOVIE FOR JOYPADS

Karl Hilton can still remember when Martin Hollis popped the question. "He opened with, 'Do you like *James Bond*?'" chuckles Karl, who was the first person to join Martin on the team as lead artist. "I was a big *Bond* fan and it sounded great fun but I was definitely worried about the reputation that movie tie-in games had back then. I'd just started at Rare and knew they didn't release bad games but I do remember looking at *Blast Corps*, which was being made next door to us, and thinking it would probably be much more popular than the movie-tie in we were starting on."

Given some of the licensed dross released prior to *GoldenEye*, Karl's concerns were understandable, though at least with their game they had some support from the production company. Visits to the studio allowed much useful photography of sets, props and costumes to be taken and the team received a draft of the script. "We weren't given any strict guidelines on what we could do so we immediately started 'padding' out the story to generate more content," explains Karl. "We wanted to visit all of the major locations even if Bond doesn't go there in the film. Plus we could use almost anything from the *Bond* universe."

Karl saw the potential for drawing on the older Bond films he had grown up with, particularly those starring his favourite Bond, Roger Moore. He initially wanted to include the Liparus submarine base from *The Spy Who Loved Me* but realising this was too complex, he instead opted for the Drax shuttle base from *Moonraker*. The many nods to the wider Bond world and the clever way the camera flew into the back of 007's head at the start of each level really helped players feel like they were morphing into the suave secret agent. "We wanted to emphasise that the player was James Bond but in an FPS you rarely get a chance to see yourself," Karl says. "This seemed like a perfect way to remind the player. Roger Moore played Bond, Pierce Brosnan was playing Bond at the time, now you can step into Bond's shoes, too."

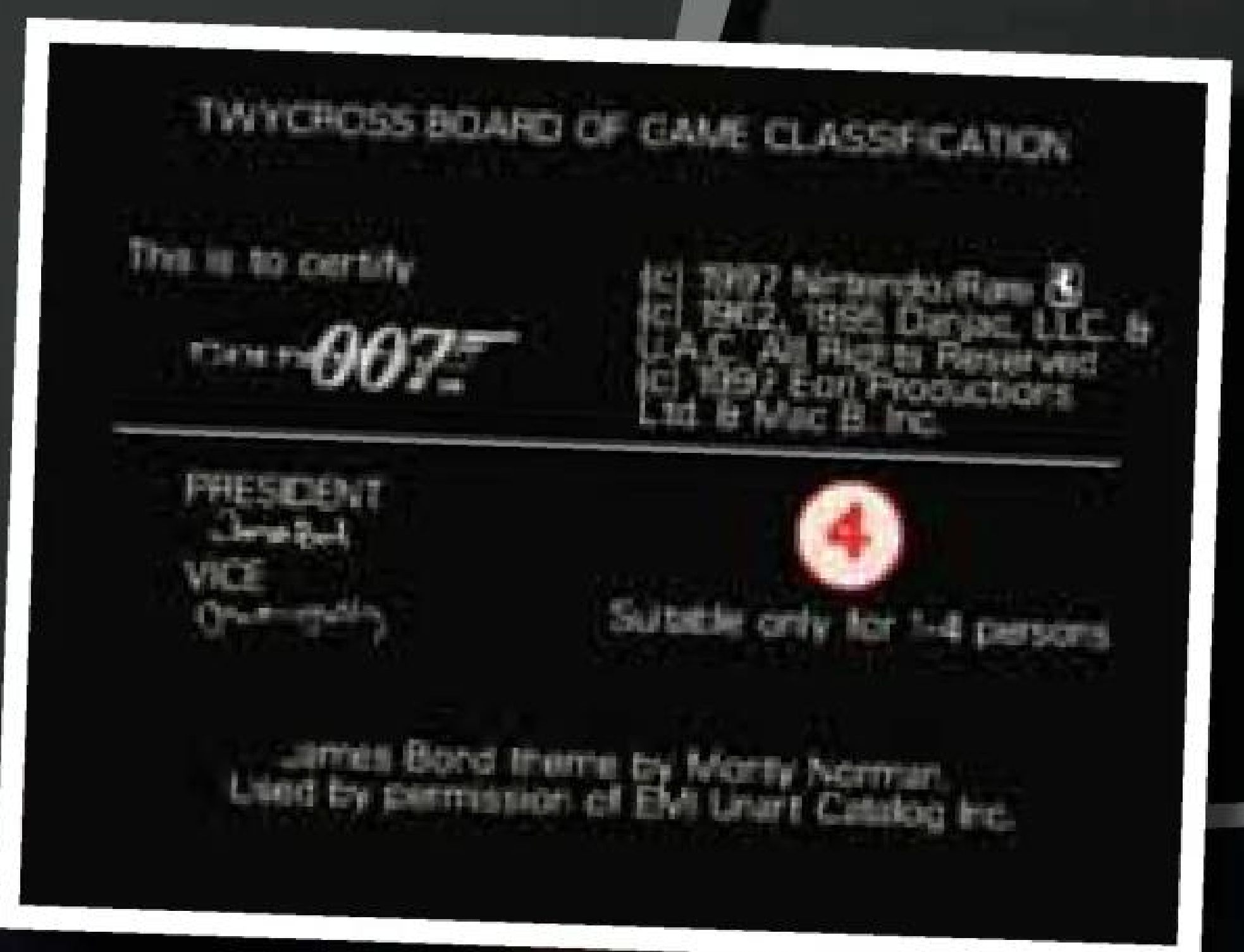
Subtle touches, like the cinematic curtain of blood that descends the screen when you die and the cuff of your tuxedo clearly visible when you check your watch for important mission information, all added to that authentic Bond feel. The watch also served another purpose, explains Karl. "We all agreed that keeping screen clutter to a minimum would give you the most immersive feeling and the watch helped you feel like you were 007 and not a generic FPS player. Although we did always joke about how short-sighted our Bond appeared to be, staring at his watch so closely."


Trevelyan: For England - James.

» The Sean Bean Principle applies to *GoldenEye*. Spoilers: he dies.

> **"WE WANTED TO EMPHASISE THAT THE PLAYER WAS JAMES BOND"**
>
> Karl Hilton

Which brings us to our key question: just how important was the licence? The game was undeniably an exceptionally well-crafted shooter, with many innovative features, but without *Bond*, would it have had the same critical and commercial success? "What could have been construed as a violent first person shooter was opened up to a much broader family audience because, culturally, James Bond is allowed to kill people and not be seen as bad," argues Karl. "It meant children could ask parents for the game! I hope it would have done well anyway that but I doubt it would have had the penetration into popular culture that the James Bond link gave it. I think *Perfect Dark* supports this to some degree. It was, in almost every way, superior to *GoldenEye*, as we'd learned so much from our first game-making attempt, yet it sold less than half [the copies]. The chance to play as James Bond is a great selling point."


TWYCROSS BOARD OF GAME CLASSIFICATION

This is to certify

007

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PRESIDENT

VICE

4

Suitable only for 1-4 persons

James Bond theme by Monty Norman.
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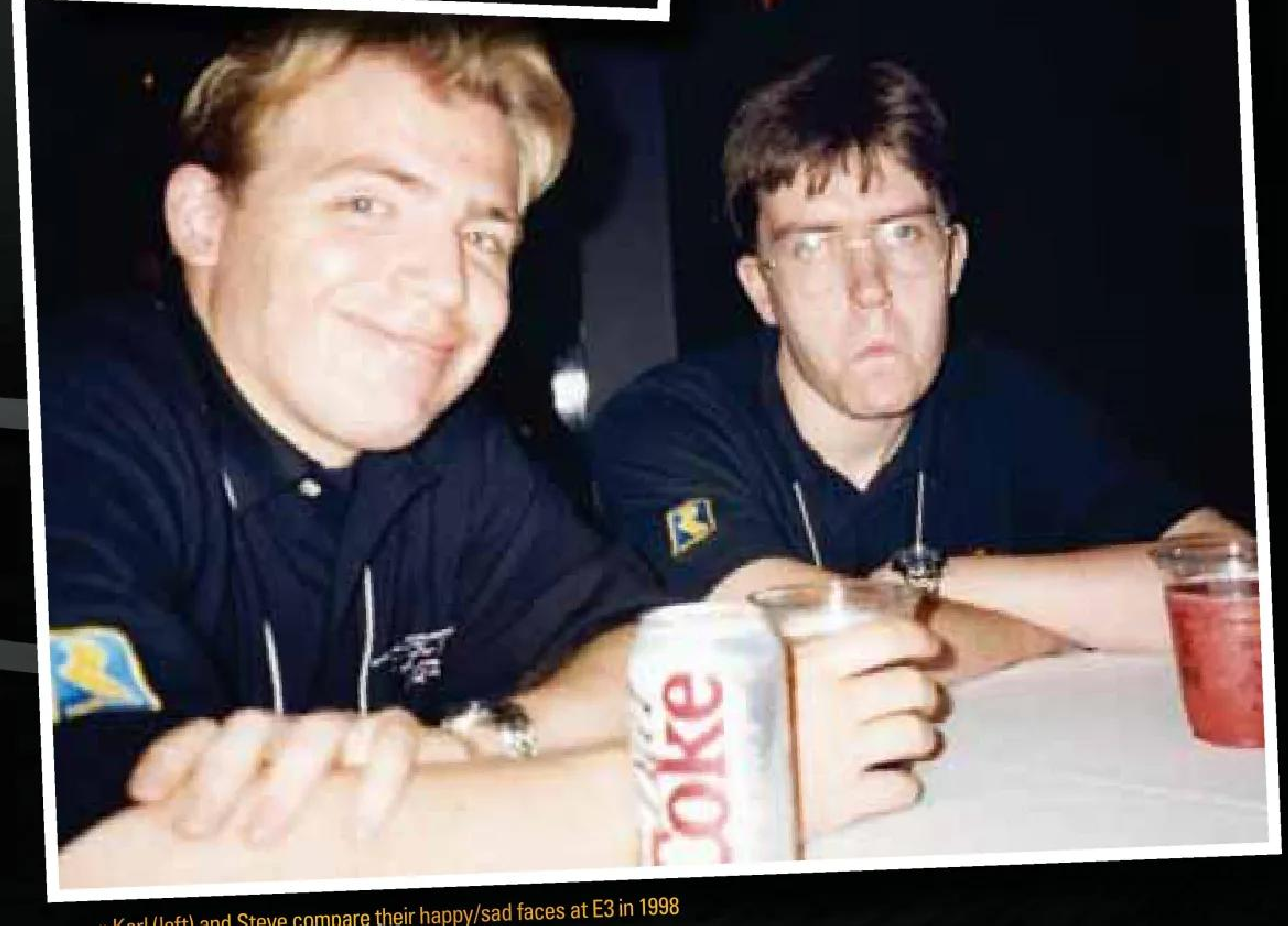


» Karl (left) and Steve compare their happy/sad faces at E3 in 1998

LOCATION, LOCATION

JETTING AROUND THE WORLD WITH BOND

ST PETERSBURGH

STATUE

■ The first of five stages set in Russia's second biggest city. Here, you have to meet up with ex-KGB agent, Valentin Zukovsky.

ARCHIVES

■ The large level requires you to escape from several of Dimitri Mishkin's men and rescue Natalaya.

STREETS

■ There are two ways through the stage and it's being timed, so you can't dawdle on either. Luckily, you gain access to a tank.

DEPOT

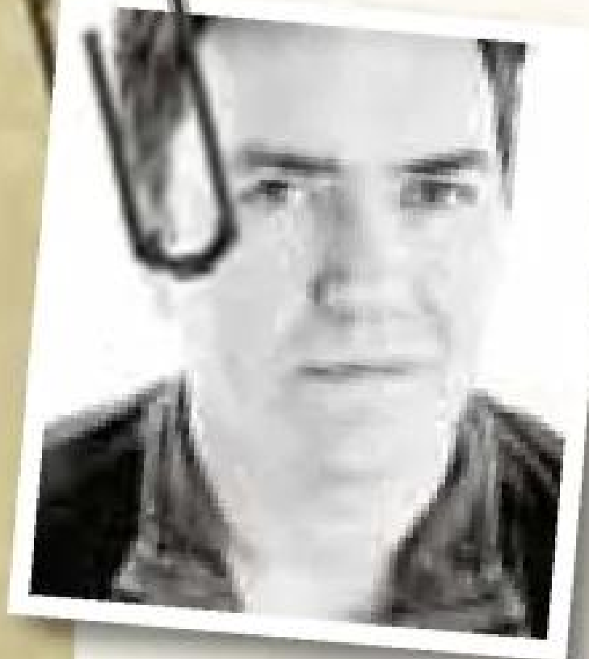
■ This rather dull stage has you trying to locate Alec Trevelyan's train. It's easier said than done, though.

TRAIN

■ The last level of St Petersberg is excellent as it requires you to fight your way through an incredibly well-guarded train.

MULTIPLAYER MADNESS

STEVE ELLIS ON MURDERING YOUR FRIENDS

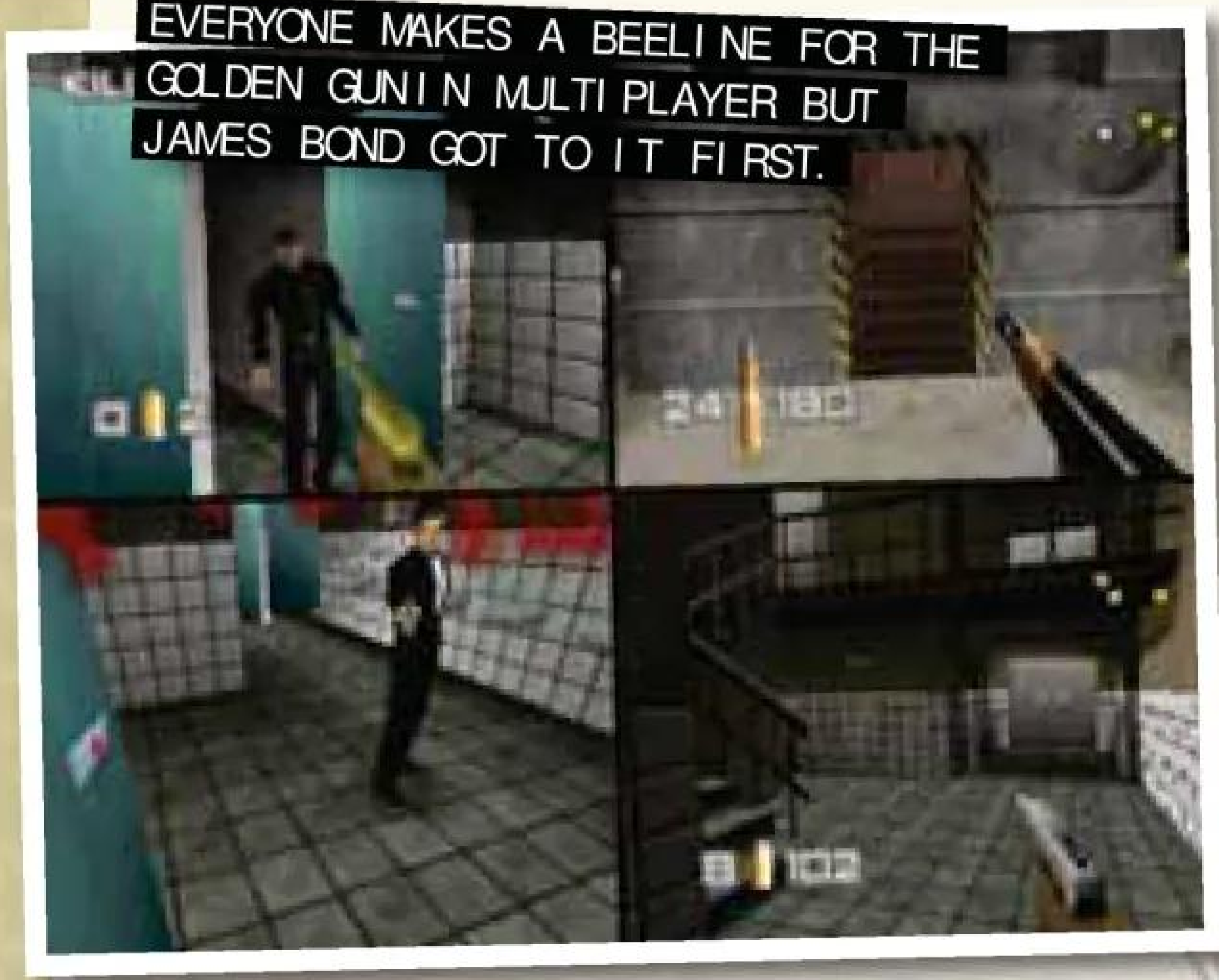


Had *GoldenEye*'s multiplayer modes always been on the 'wish list' of features?

To be honest, I don't remember discussing multiplayer before we started doing it. We'd been too busy making the rest of the game! It wasn't until something like April 1997 that work actually started on it and it progressed incredibly quickly by today's standards. Because it came so late in development, we had already finished work on the animation so we had to make do without any animation for moving while crouching. There just wasn't time to do anything about that.

Was multiplayer prompted by you and the team playing *Bomberman* or *Doom* deathmatches together?

I don't think we ever played multiplayer *Doom* because we didn't have any PCs but we certainly spent a lot of time playing *Bomberman* at lunchtimes and we also had an early, unfinished version of *Mario Kart 64*. It was more that the things which would be good seemed obvious to us, and we just got on with doing them and playing the game every day to see what was working and what wasn't.



EVERYONE MAKES A BEELINE FOR THE GOLDEN GUN IN MULTIPLAYER BUT JAMES BOND GOT TO IT FIRST.

How did you go about turning an almost complete single player game into a multiplayer one?

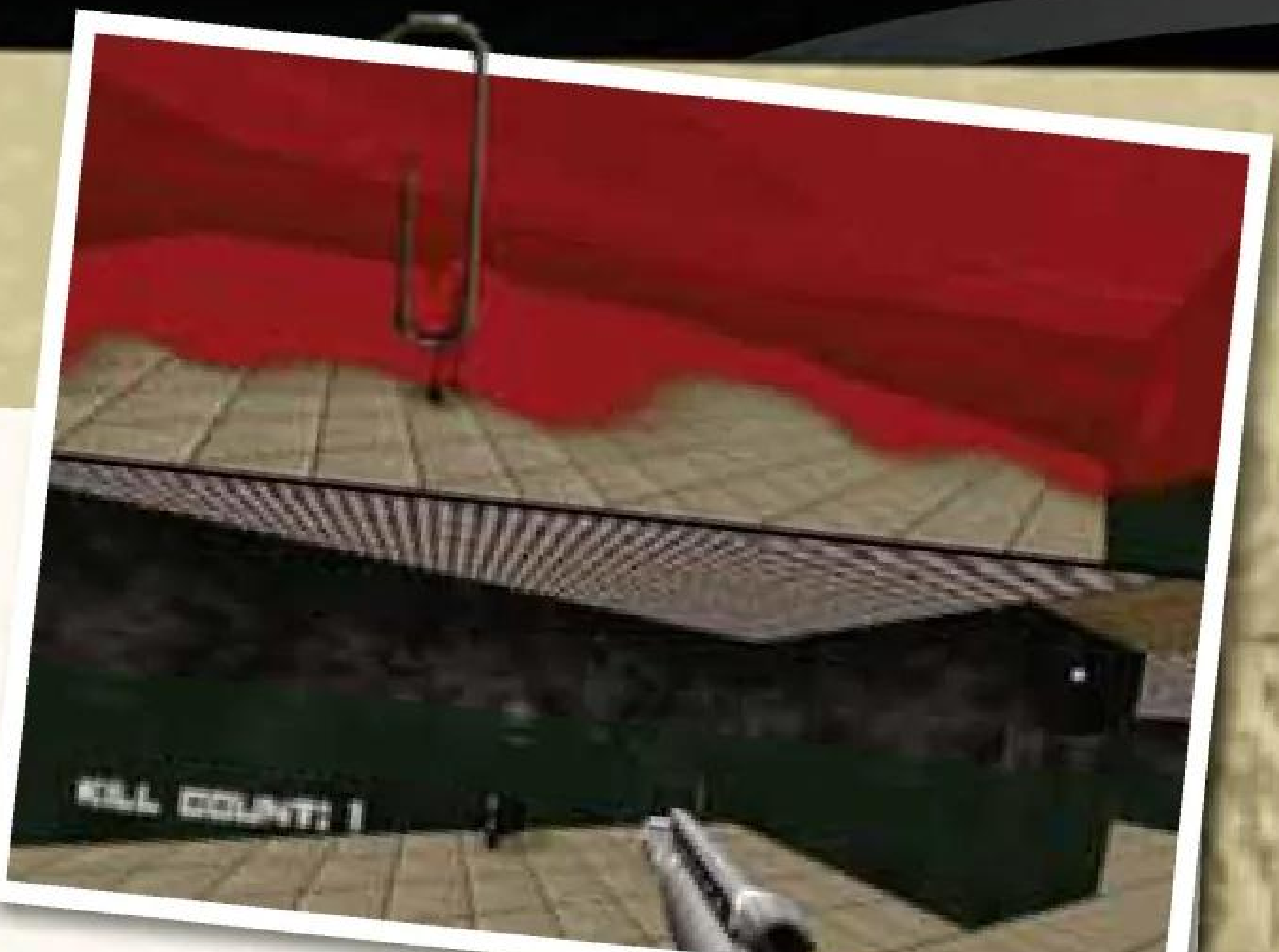
I had to introduce the concept of a 'player' into the game and gather all of the player's properties – their position, direction, health, ammo, animations and hundreds of others – into one place and then go through all of the tens of thousands of lines of code and make sure that anything that accessed player data was aware that there might be more than one player in the game. Hundreds, possibly thousands, of now-invalid assumptions had to be fixed, one by one. And because the game had been coded in C, which doesn't encourage programmers to be as structured as they would be with C++, the code had been written in a fairly freeform way with bits and pieces of data scattered all over the codebase.

It sounds a mammoth task.

We didn't know whether it would work when we started. My biggest doubt was whether it could work at an acceptable framerate. If it was going to be rendering up to four times as many triangles, maybe it would run at a quarter of the frame rate and be unplayable? The only way to find out was to do it, and of course some of the levels weren't available in multiplayer for those exact reasons, but luckily a good number of them performed well enough that it was worth continuing.

Didn't you keep everything multiplayer secret from the Stamper brothers?

I wasn't under instructions to frantically switch to another window if Chris Stamper entered the building, but then we didn't tend to see much of him so it would have been easy to keep it quiet without trying. I can't remember exactly when Martin told them about it, but it was well after the proof-of-concept stage. Obviously I was proud of what we'd achieved and Chris's reaction to good work was always positive.



"MY DOUBT WAS WHETHER IT COULD WORK AT AN ACCEPTABLE FRAMERATE"

Steve Ellis

Didn't Chris worry that multiplayer wouldn't be fun because you can see where your opponents are?

I never thought split-screen would have that kind of problem because if you're spending time looking at the other screens, you're probably not looking at your own enough to stay alive. I do remember arguing with Karl Hilton about the radars. He hated them so eventually I added a cheat to allow players to switch them off. It said something like 'Happy now, Karl?' when you activated it.

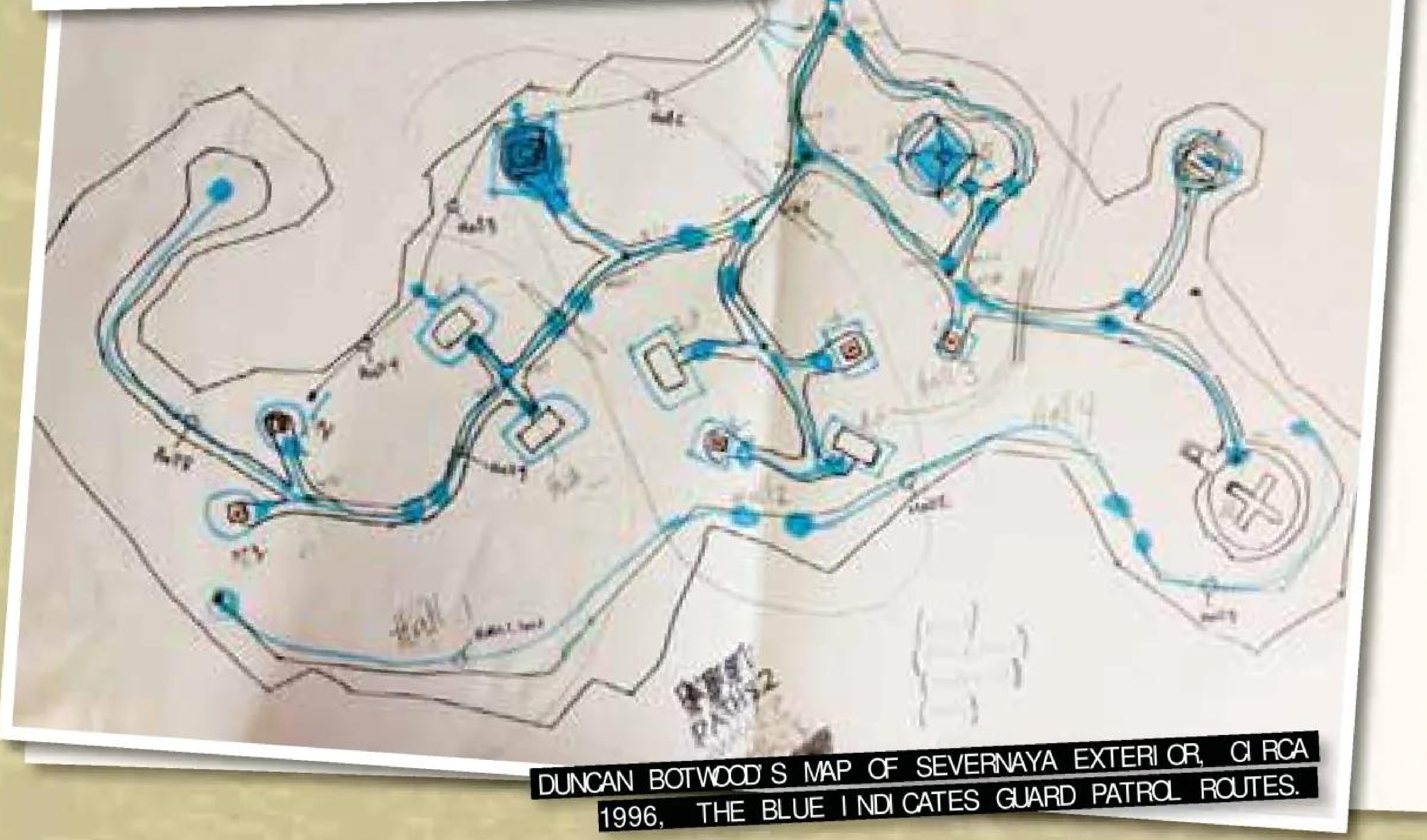
Multiplayer wasn't all you worked on, of course.

Growing up, I'd spent a long time doing assembly language programming on the Spectrum and later the Amiga, so I did a lot of low-level programming and optimisation for *GoldenEye* like texture mapping, RSP Microcode and demand-paged virtual memory, which simulates having more RAM than you actually do have by fetching things into memory only when they're needed. Sorry to get technical. I worked on visual effects like explosions, smoke and bullet holes and added the hidden Spectrum emulator. Lots of other stuff.

How important was multiplayer to the success of *GoldenEye*?

I think it challenged some people's assumptions about how fun split-screen multiplayer could be and I think it got a lot of attention for that. Without it, I don't think we'd be talking so much about the game 20 years later, despite its other 'firsts'.

Huge thanks to all the team for their time and to Graeme, Duncan and Karl for use of their original photos and artwork.



DUNCAN BOTWOOD'S MAP OF SEVERNAYA EXTERIOR, CIRCA 1996. THE BLUE INDICATES GUARD PATROL ROUTES.

DID YOU KNOW?

GoldenEye features a ZX Spectrum emulator and ten games, buried deep within the code. You can access it with a N64 emulator and the relevant patch.

LOCATION, LOCATION

JETTING AROUND THE WORLD WITH BOND

CUBA

JUNGLE

■ You've been shot down by a missile and must escape this guard-infested jungle. You'll also have to watch out for Xenia Onatopp.

CONTROL

■ This mission has you leading Natalaya to a computer so she can hack it. You'll come under fire once she starts, so protect her.

CAVERNS

■ Here you navigate lots of identical looking caves and finding security cards to open otherwise impenetrable doors. Not fun.

CRADLE

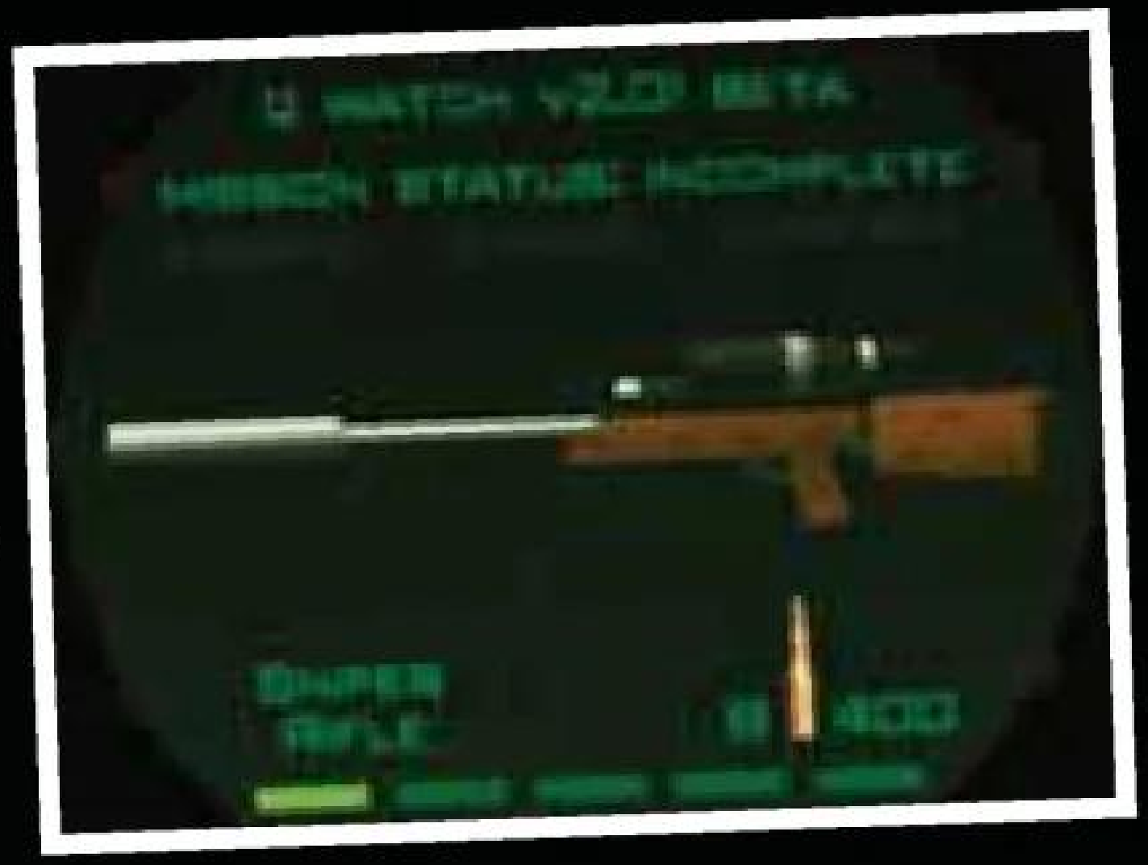
■ The final stage features another time limit and has you trying to stop Trevelyan from realigning the GoldenEye satellite.

Shoot To Kill

OUR OWN PERSONAL PICKS FROM Q'S LAB

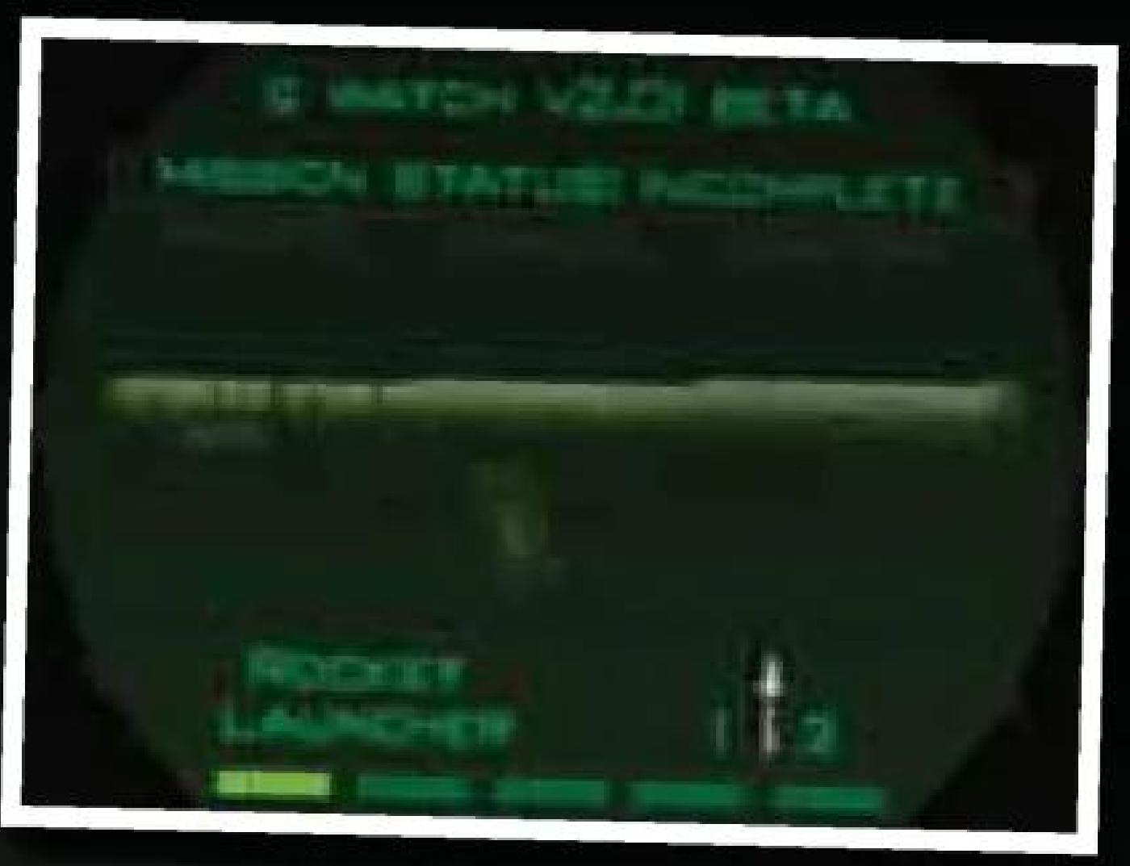
SNIPER RIFLE

■ It's certainly not the easiest gun to use, but it does have amazing range, allowing you to kill from a safe distance, without fear of being shot.


Q WATCH V2.01 BETA
MISSION STATUS: INCOMPLETE
SNIPER RIFLE

ROCKET LAUNCHER

■ The great thing about this piece of metal is that you don't need to be super-accurate. Just make sure to get them in the blast radius.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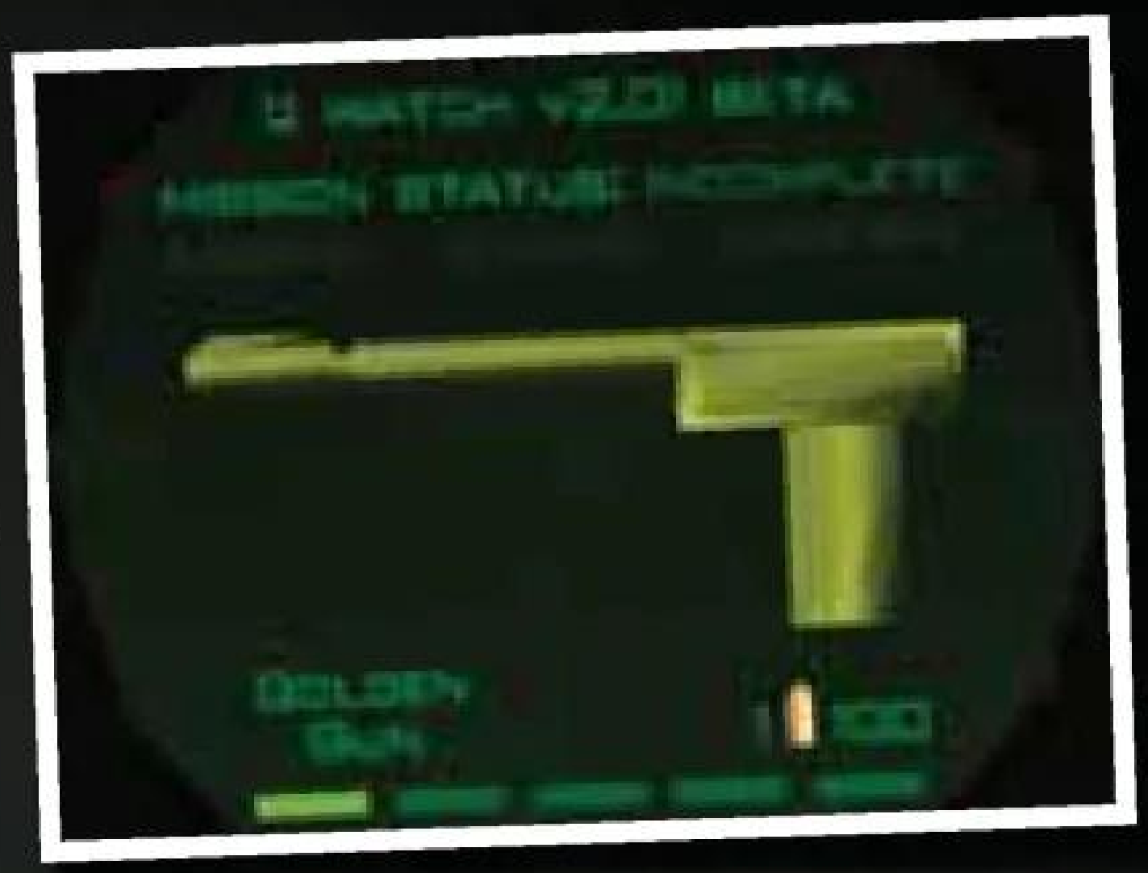
MISSION STATUS: INCOMPLETE
ROCKET LAUNCHER

GOLDEN GUN

■ It's only available in the story mode via cheats, but it was available to use in multiplier mode. It's highly coveted because it can kill with a single shot.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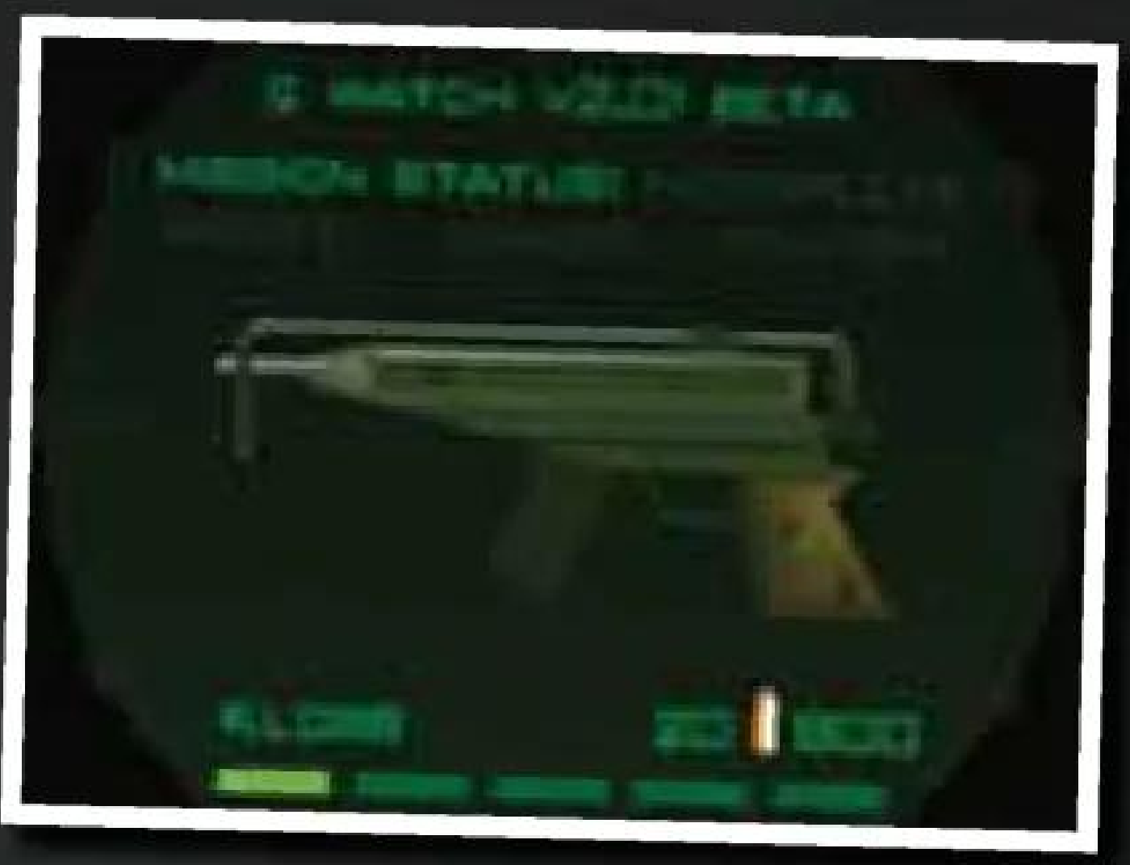
GOLDEN GUN

KLOBB

■ Named after Nintendo's Ken Lobb, this wonderfully pathetic piece of hardware is only really worth using when paired. It's such an iconic gun we had to include it.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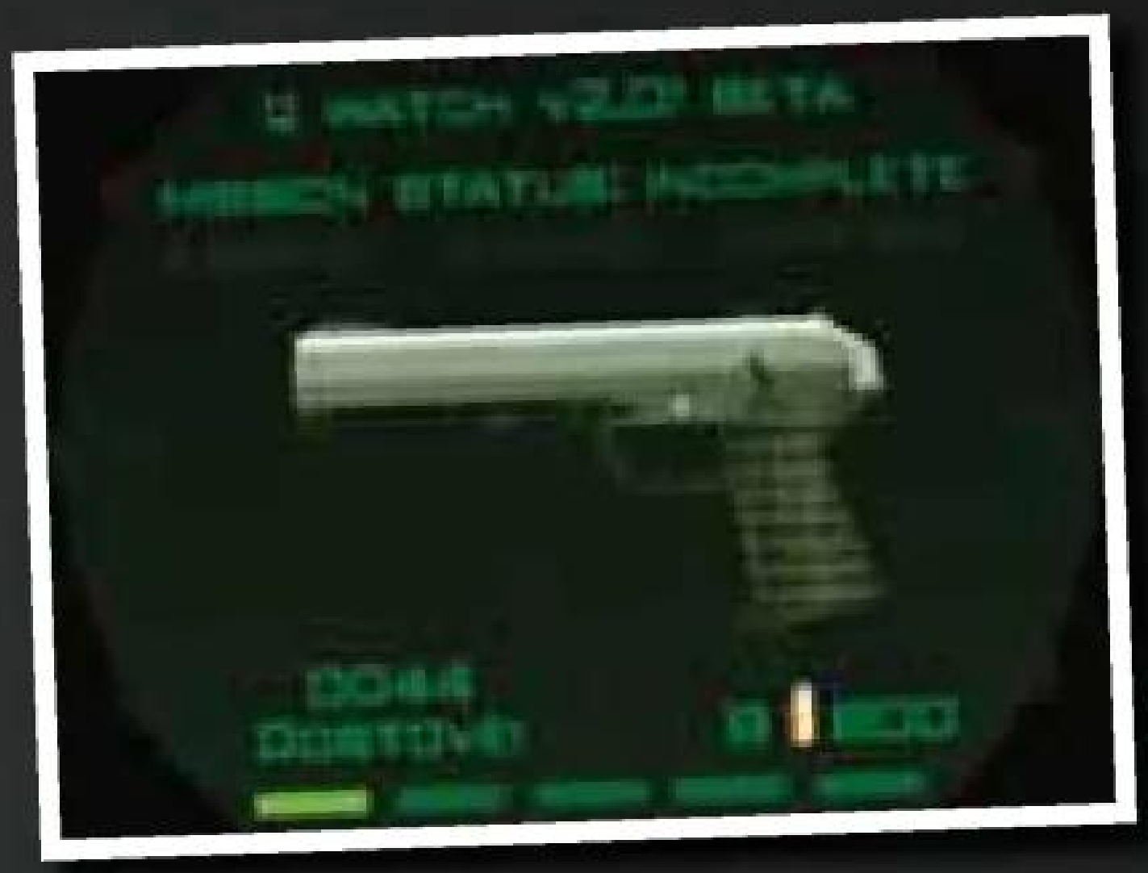
KLOBB

DD44 DOSTOVEI

■ It's not quite as accurate as the PP7, but it does carry more bullets and we all know that it's bullets that kill people.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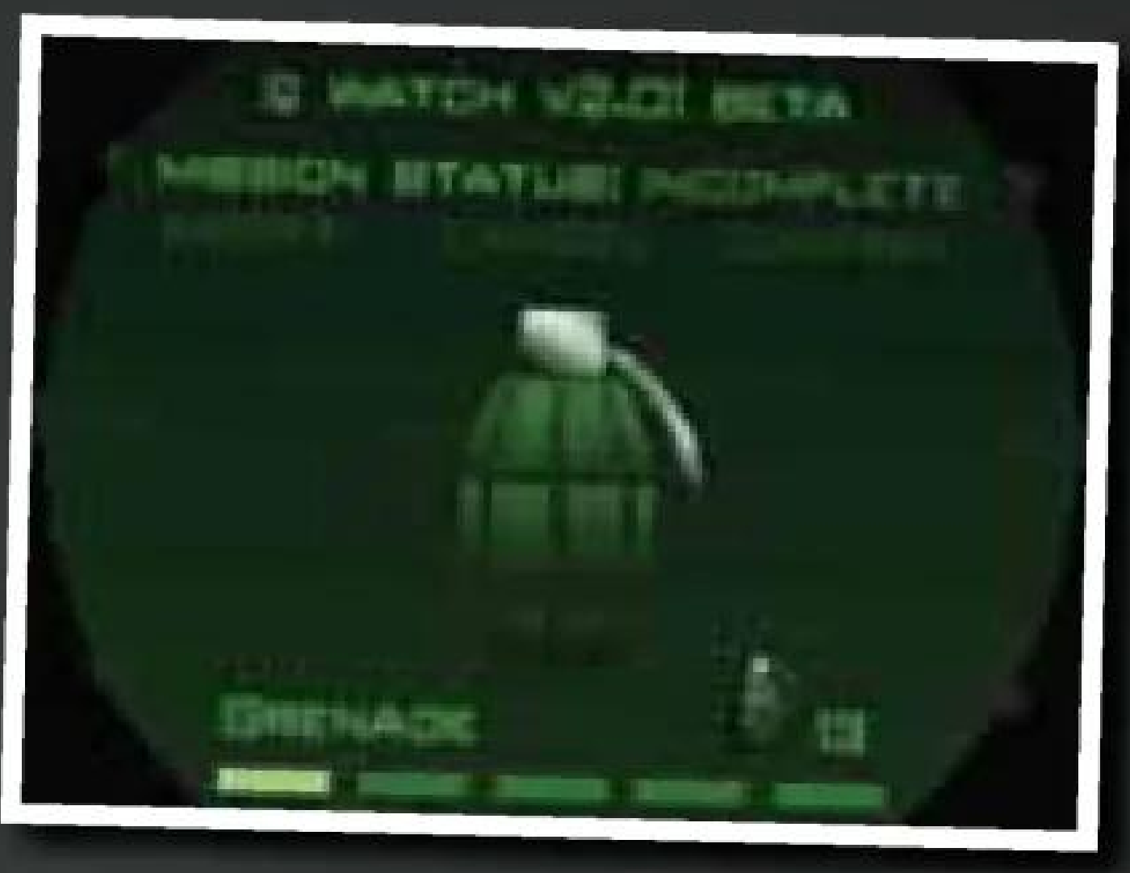
DD44 DOSTOVEI

GRENADE

■ You have to be quite skilled at throwing them, but the splash damage caused by lobbing a well-timed grenade should not be underestimated. Lob em and run.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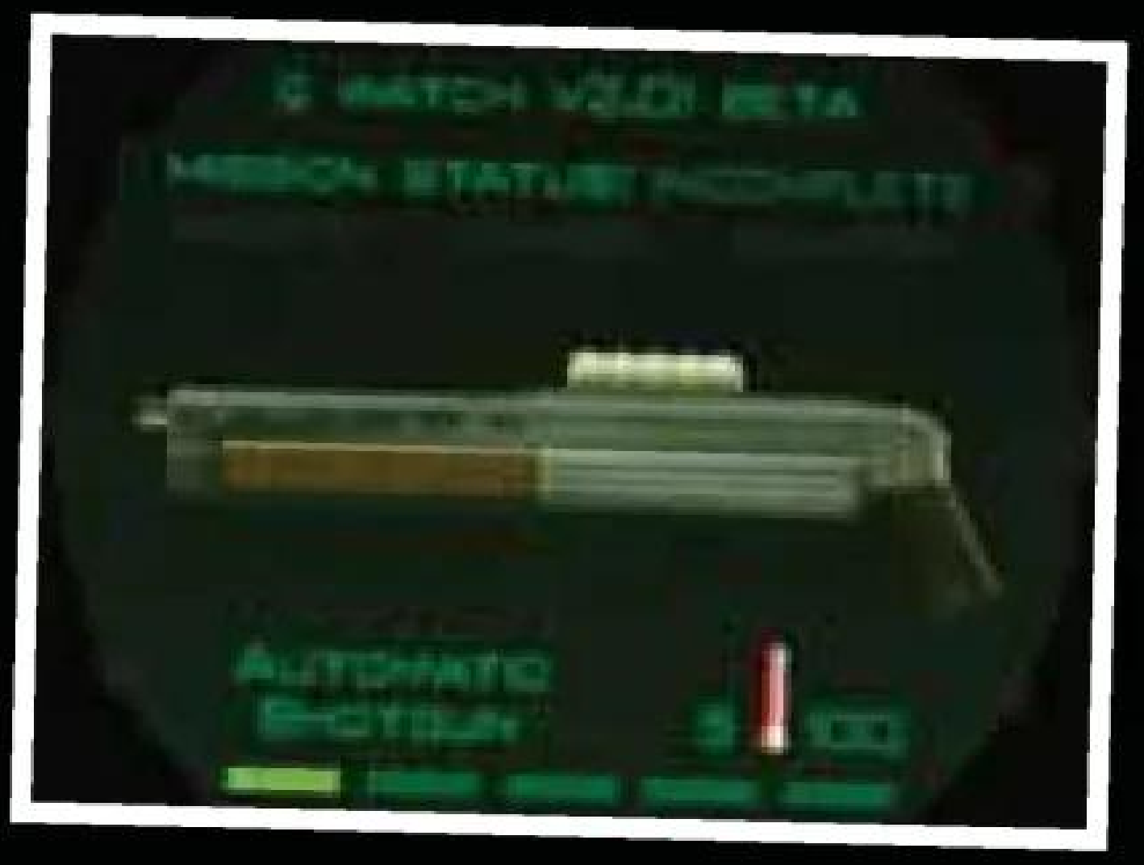
GRENADE

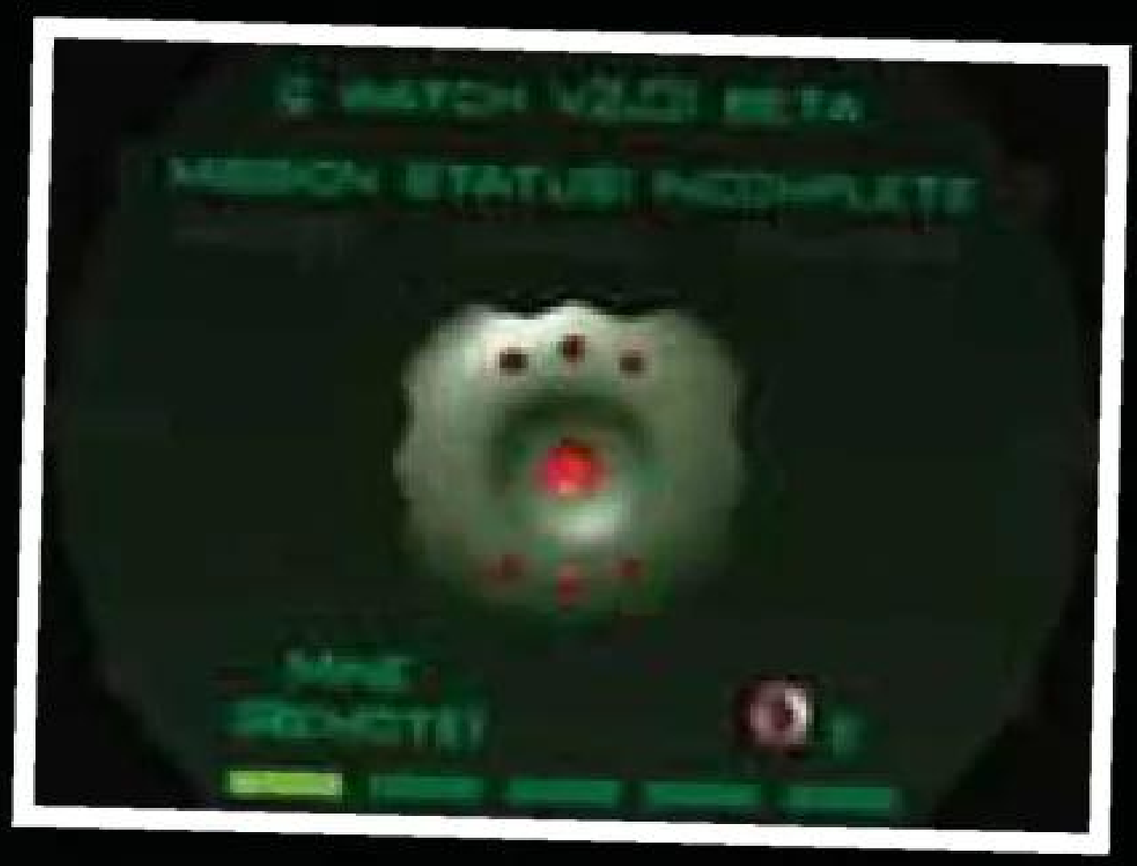
AUTOMATIC SHOTGUN

■ You'll need to get close, which isn't ideal, but the reward is a powerful blast that will turn your opponent's insides into mincemeat.


Q WATCH V2.01 BETA
MISSION STATUS: INCOMPLETE
AUTOMATIC SHOTGUN

REMOTE/ PROXIMITY MINE

■ Perfect for those levels that have lots of annoying nooks. Plant a couple and wait for your opponent's swears of frustration.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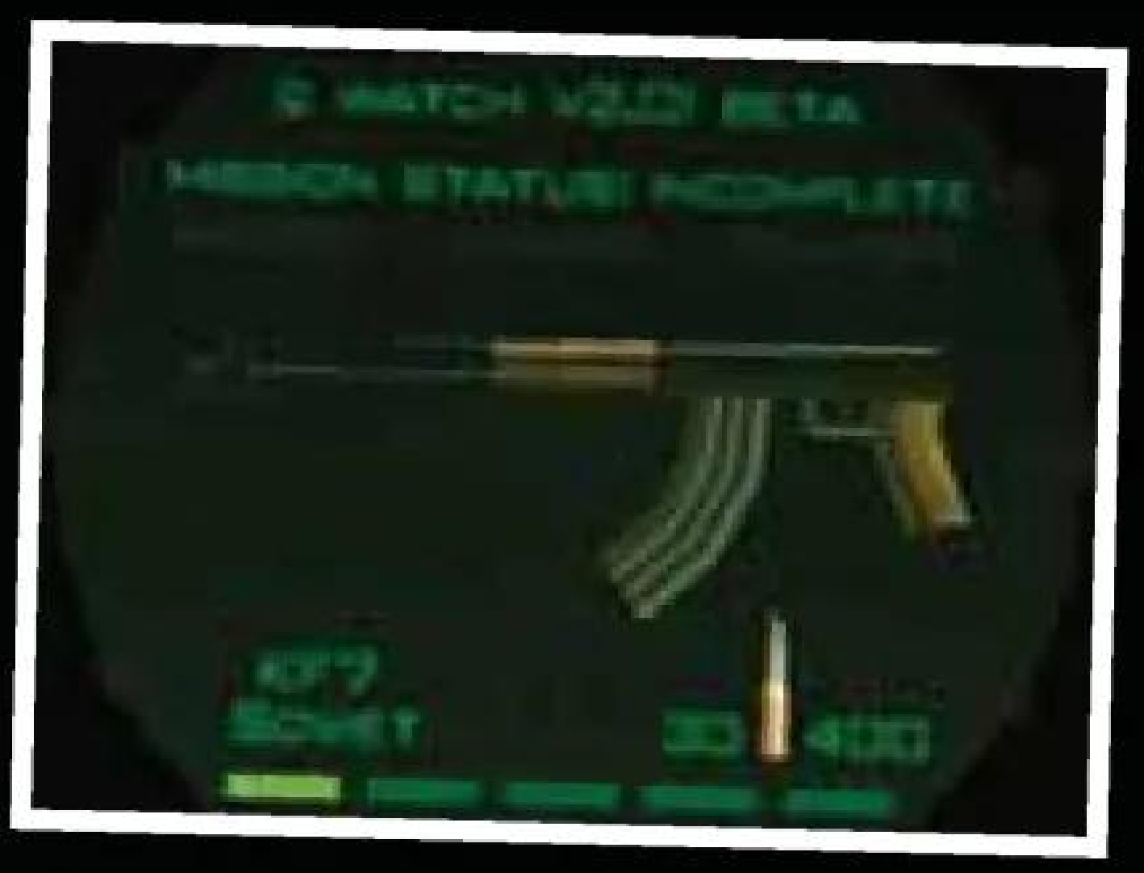
MINE (REMOTE)

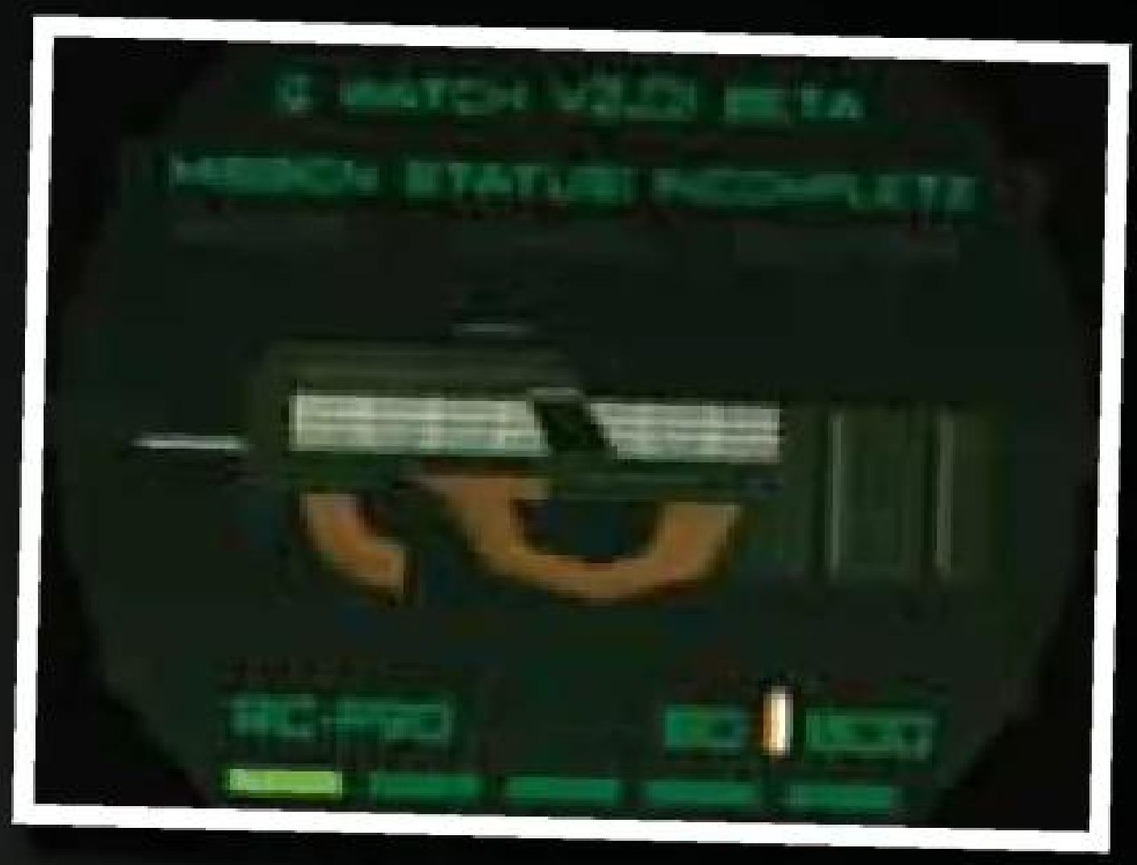
KF7 SOVIET

■ This is possibly one of the most balanced weapons in the game, with good ammo, decent range and plenty of stopping power.


Q WATCH V2.01 BETA
MISSION STATUS: INCOMPLETE
KF7 SOVIET

RC-P90

■ This weapon has everything – great penetration, an insane magazine capacity and extremely good damage. It also fires ridiculously fast.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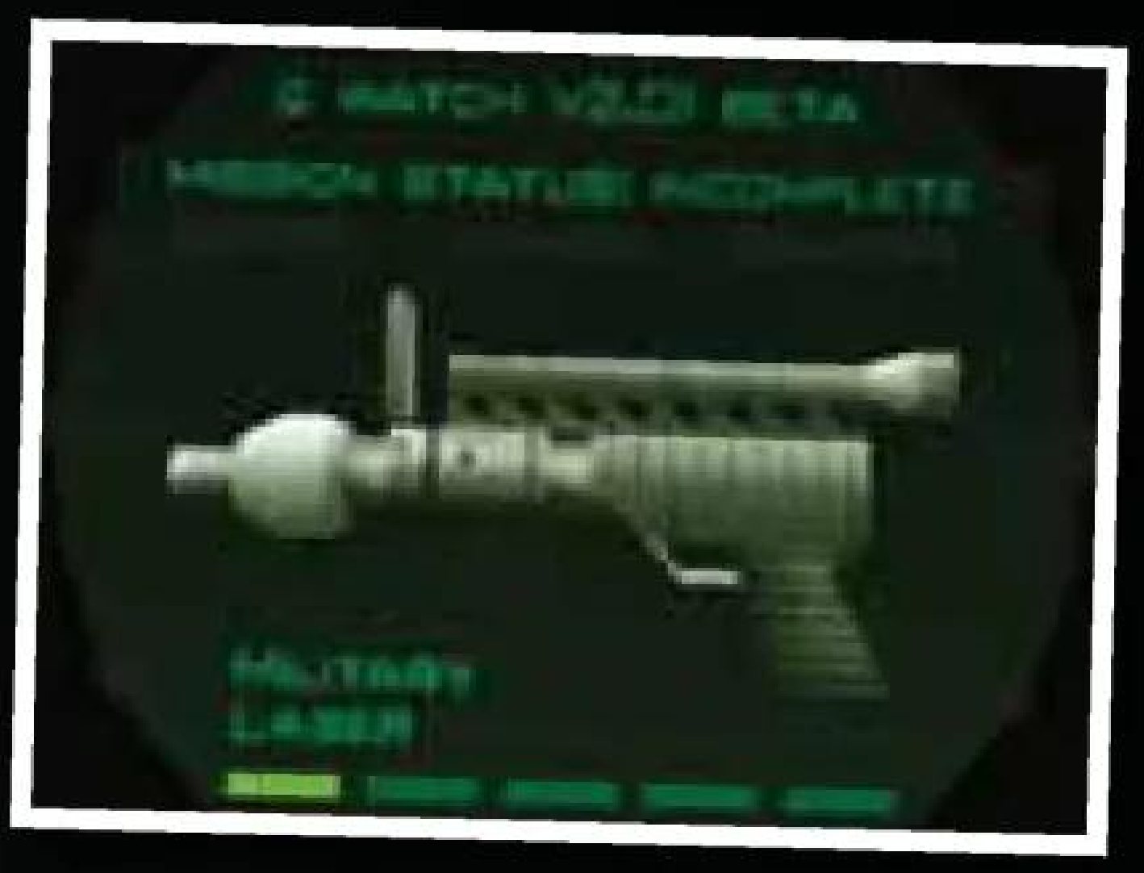
RC-P90

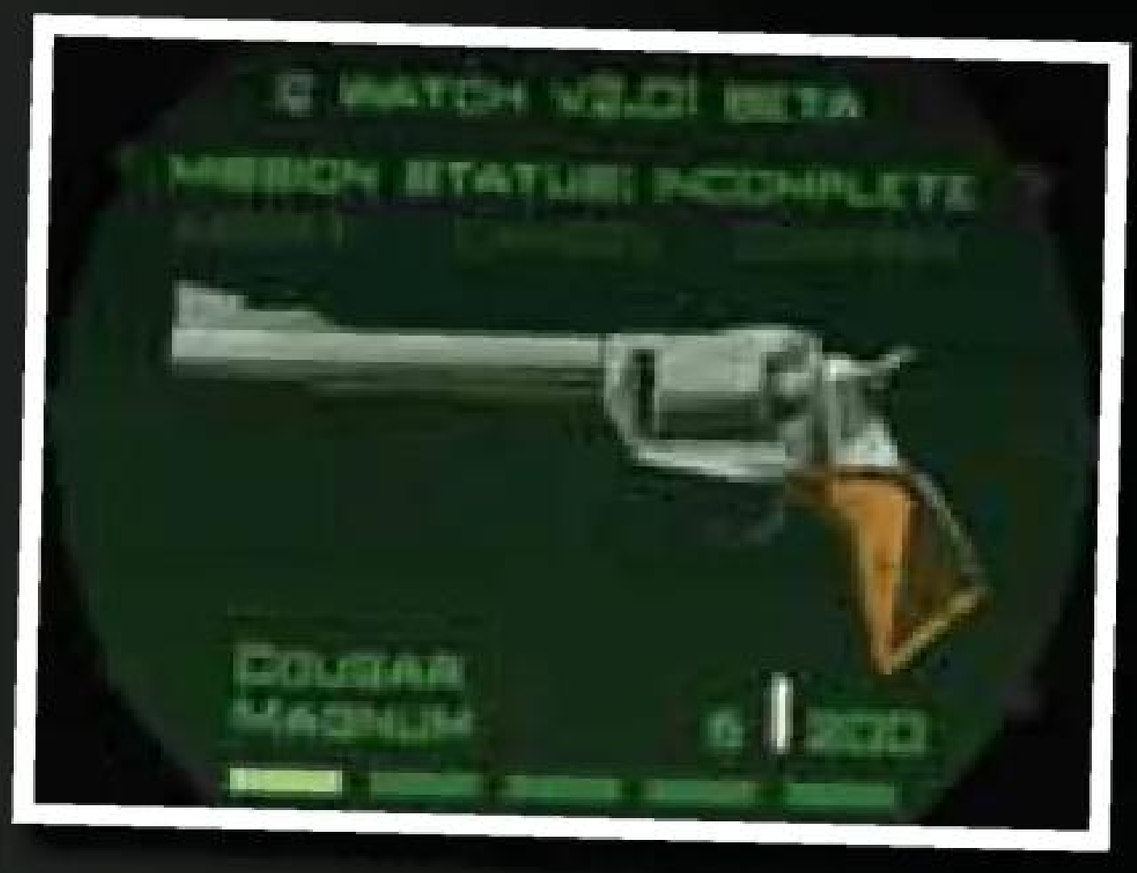
MILITARY LASER

■ This laser has no ammo limitations, making it extremely useful in a gunfight. It also boasts fantastic stopping power and looks cool.


Q WATCH V2.01 BETA
MISSION STATUS: INCOMPLETE
MILITARY LASER

COUGAR MAGNUM

■ Accuracy is massively impaired but the stopping power on this thing will halt a rhino. Plus it makes you feel like you're Clint Eastwood, which is nice.


Q WATCH V2.01 BETA
MISSION STATUS: INCOMPLETE
COUGAR MAGNUM

CLASSIC MOMENTS

Lylat Wars

» PLATFORM: N64 **» DEVELOPER:** NINTENDO **» RELEASED:** 1997

The most iconic part of *Lylat Wars* outside of its main cast of anthropomorphic sci-fi heroes is surely the bizarre, but brilliant idea that the last boss is a floating gorilla head. The final scrap with Andross, which is certainly a step up in difficulty from any of the preceding levels, varies depending on which of the game's two branching narrative routes you take – the more difficult one ends with Andross transforming into his true form, a disgusting giant brain, and climaxes with you performing a daring *Return Of The Jedi*-style escape from danger.

But all routes end with an assault on this giant gorilla head, which is animated so expressively, and the scale of which is so impressive, even relative to the other gigantic boss battles earlier in *Lylat Wars*. It was a brilliantly surprising reward for your efforts that tonally matched the climax of *Star Fox* on SNES but made the most of the possibilities granted by the N64's 3D technology.

BIO

Known as *Star Fox 64* everywhere else but Europe – apparently due to a possible copyright dispute over the name 'StarVox' in Germany – according to developer Dylan Cuthbert, this sequel to *Star Fox* on SNES had a weird journey to completion. You probably know the story of *Star Fox 2*, the scrapped SNES sequel, which debuted the multi-route structure that eventually surfaced in *Lylat Wars* – some of the content made it into this N64 title, but the majority of *Star Fox 64* was original. Being skilful allowed the player to unlock new paths through the story; an undoubtedly forward-thinking idea in an energetic arcade shooter.

MORE CLASSIC LYLAT WARS MOMENTS

Another path

068
I found the target !

Lylat Wars leaves it to you to discover the different routes through levels offered by the story, and the first time that happens to you is pretty damn exciting – circumnavigating a few tight cliffs leads Falco to take you through a waterfall and fight a completely different end boss. This is when *Lylat Wars* starts to branch, letting players gradually peel off each strand of its vast galaxy.

Starwolf showdown

Players face Starwolf no matter which path they take. It's in this encounter, however, on the Death Star-like surface space station environment of Bolse, that *Lylat Wars* feels the most like a *Star Wars* movie. With surface cannons sending laser fire everywhere and swarms of enemy fighters, it's essentially structured like the Death Star battle: take out your rivals, blow the core and we'll go home.

Ground assault

A pleasing departure from Arwing-related combat is the opportunity to drive a landmaster during the Macbeth and Titania levels, putting you on ground level for some variety in combat dynamics as this moving armoured train throws boulders at you. Of course, Peppy and company still fly by Arwing, being the cowards they are (and it would be complicated to program ground AI for all four characters).

Solar

Level design is amazing in *Lylat Wars* – it's easily one of the most enjoyable space shooters outside of LucasArts' back-catalogue, with each level using the mechanics in a different way. In Solar, that's taken further by the fact your Arwing is constantly running down in health as you progress through this hot planet, meaning that you have to keep killing enemies or destroying rocks to survive.

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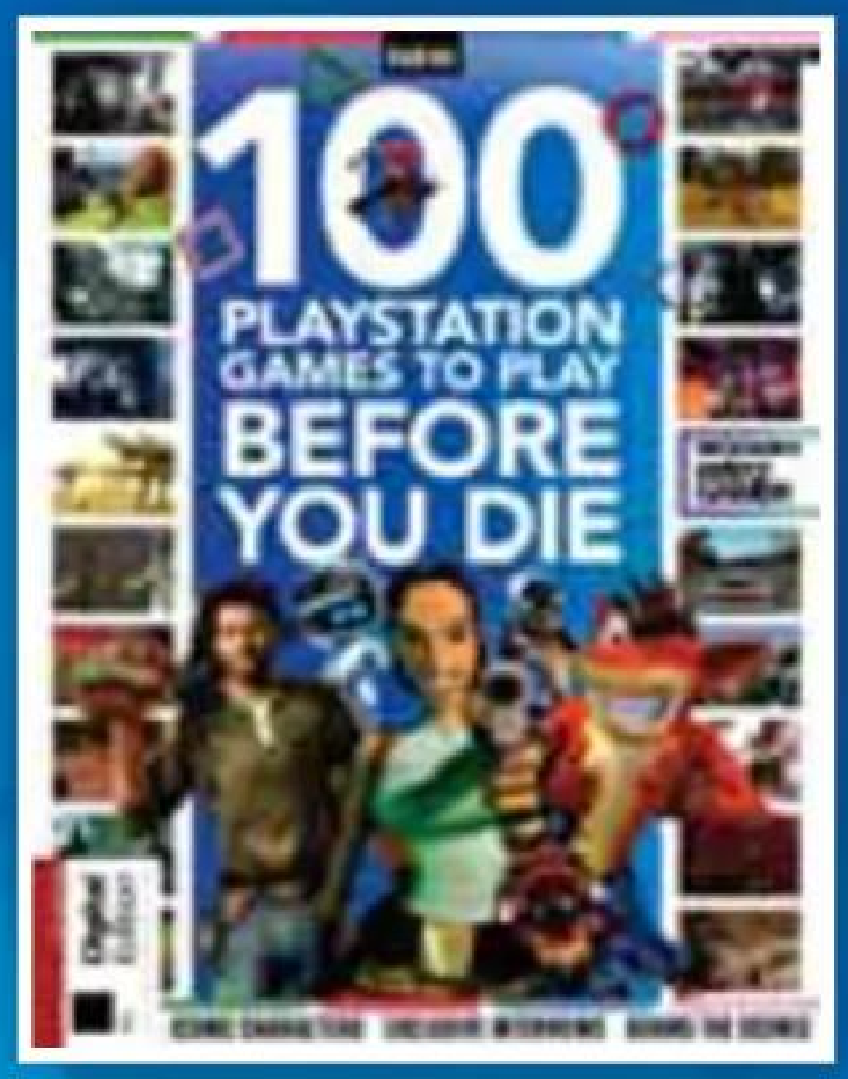
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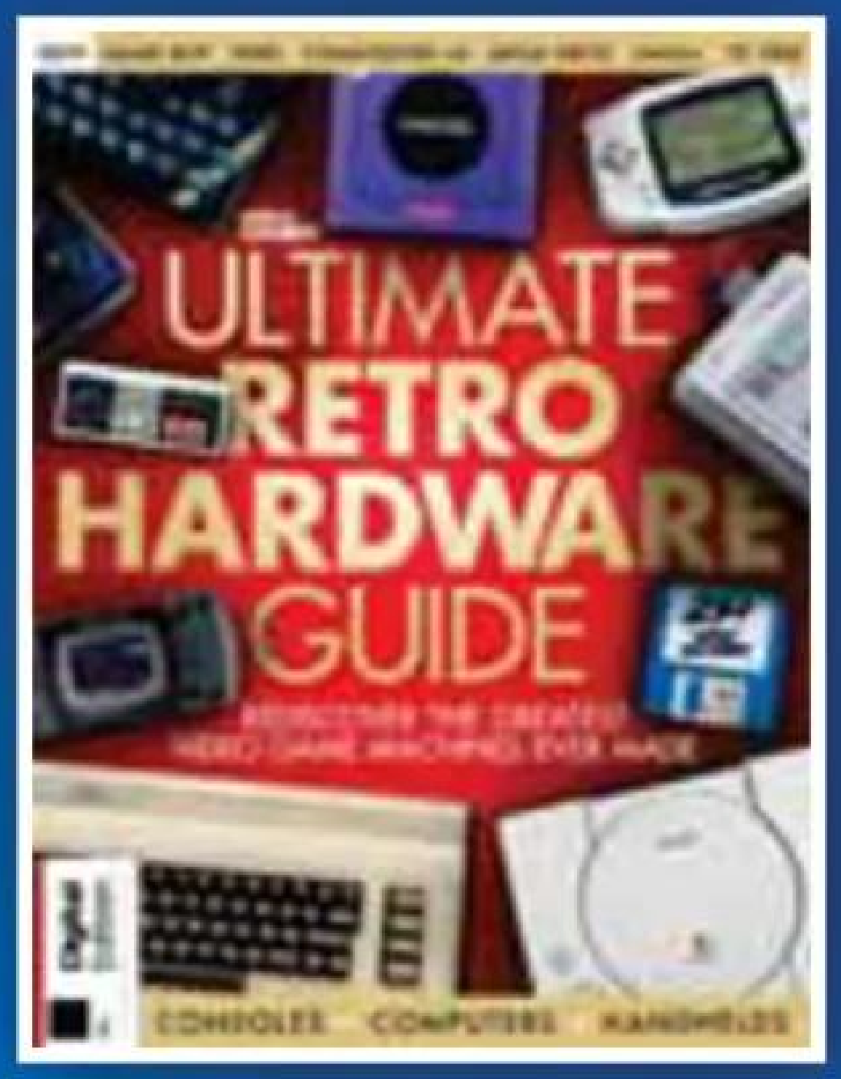
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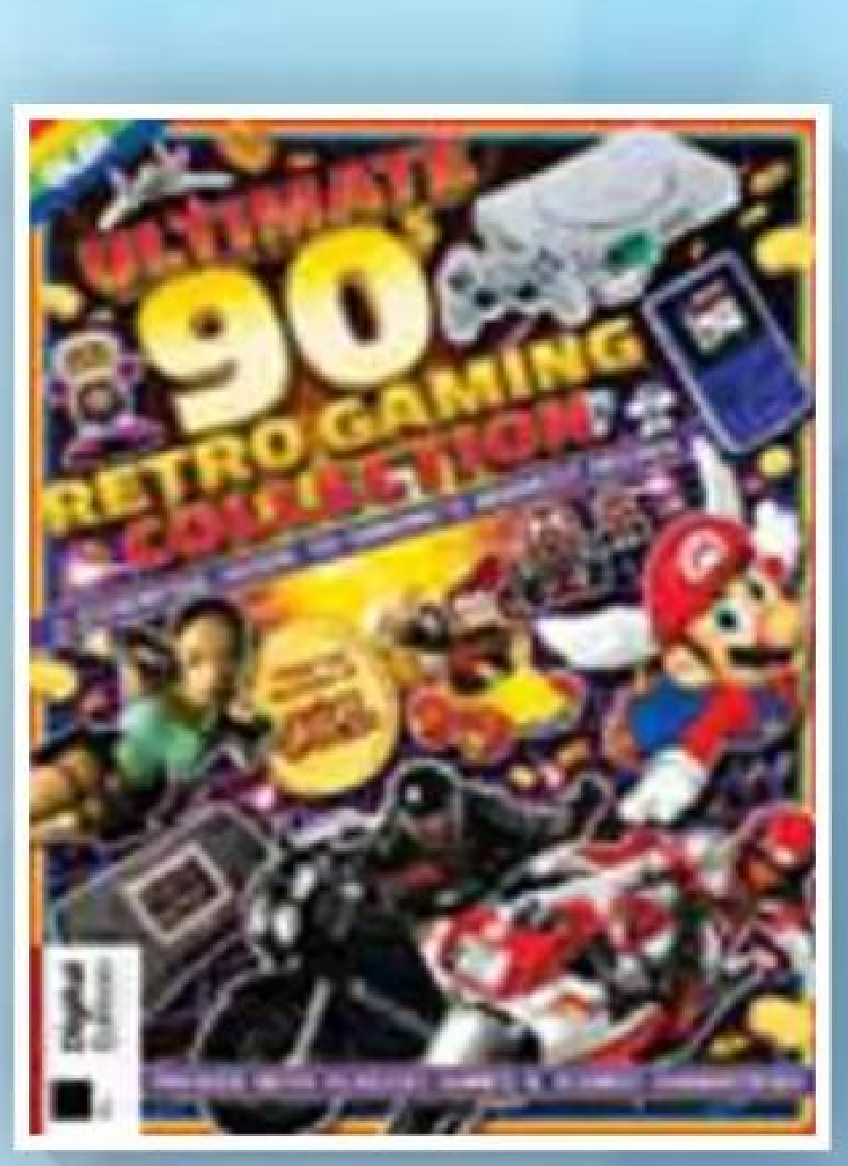
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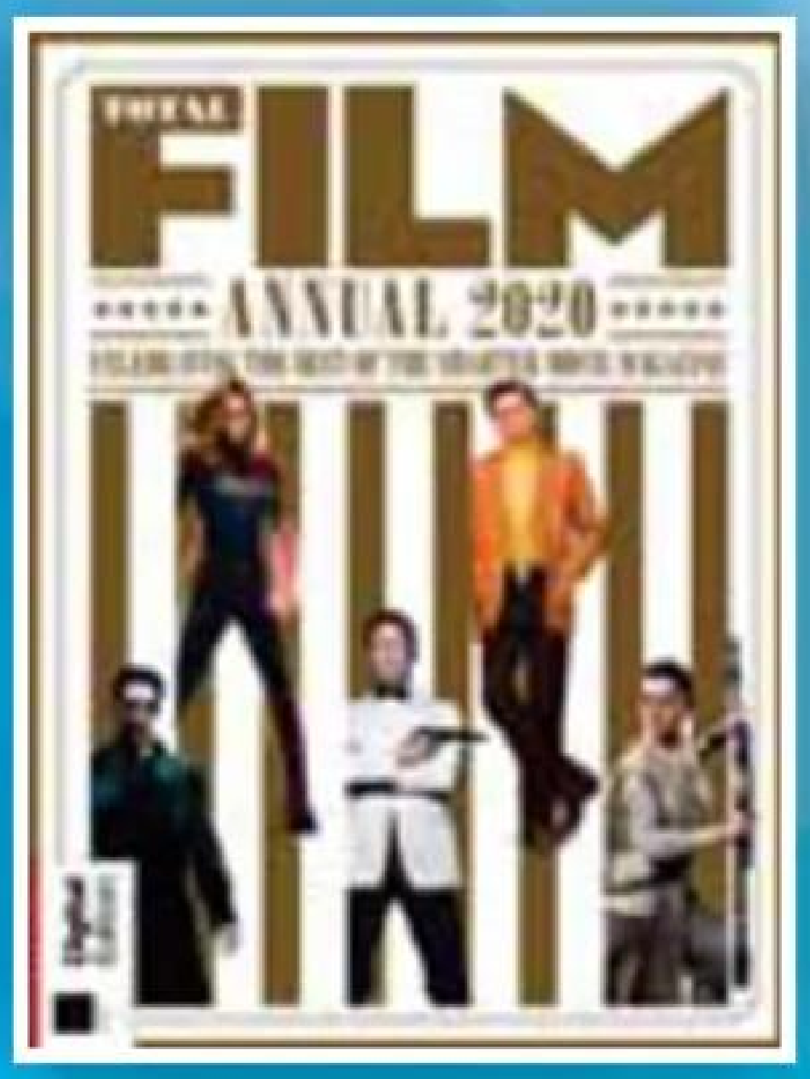
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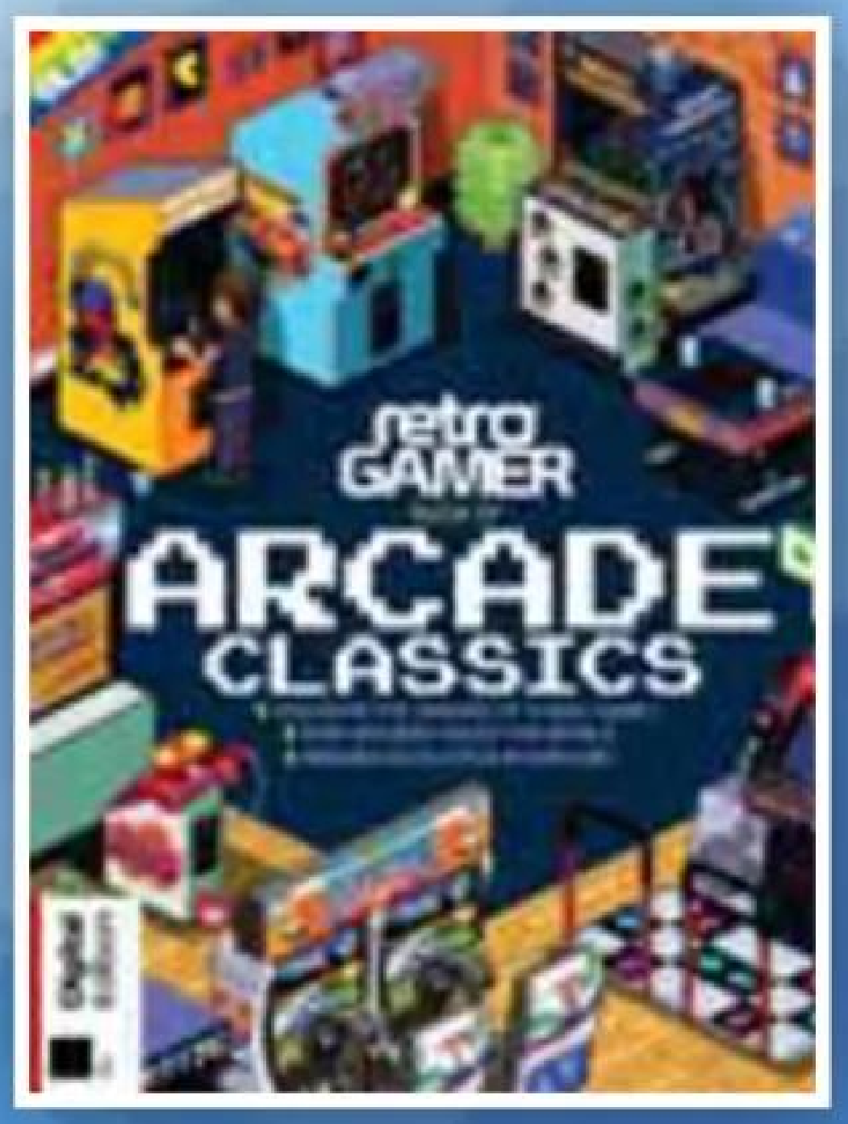
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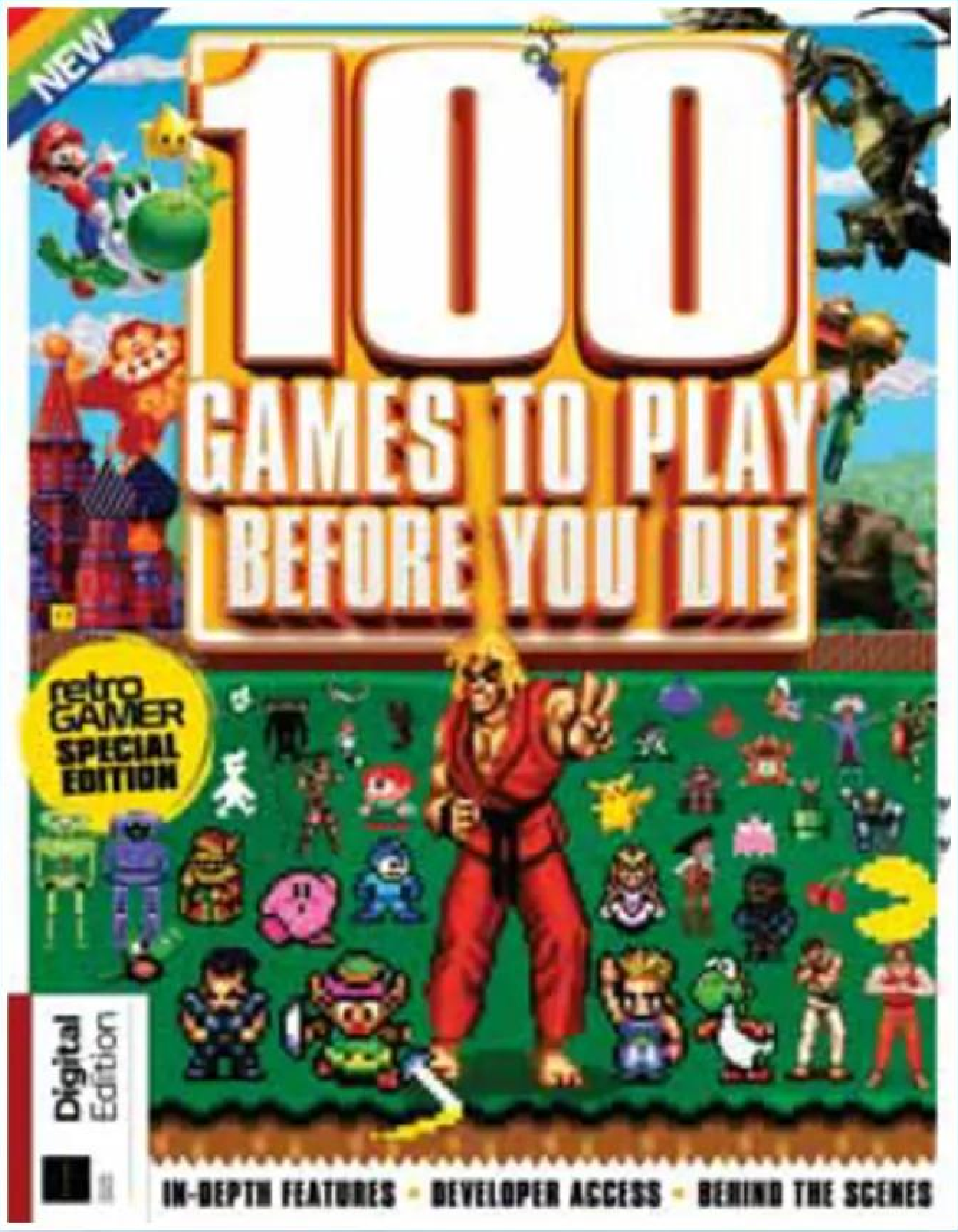
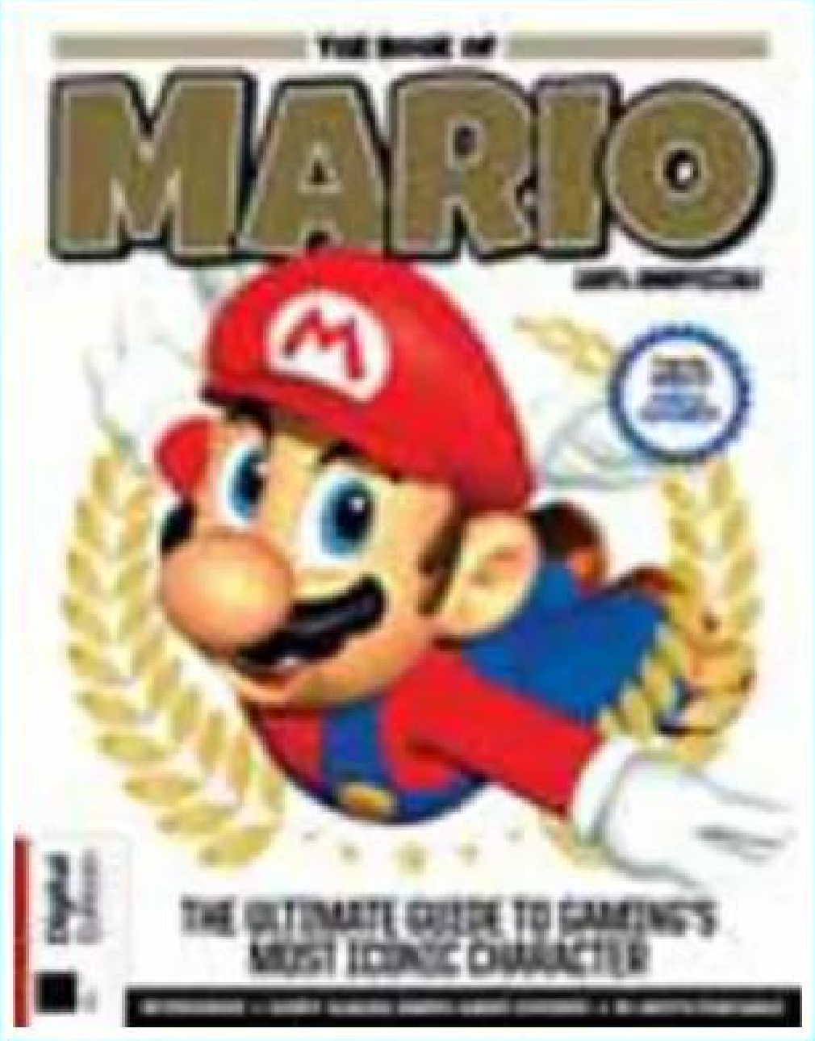
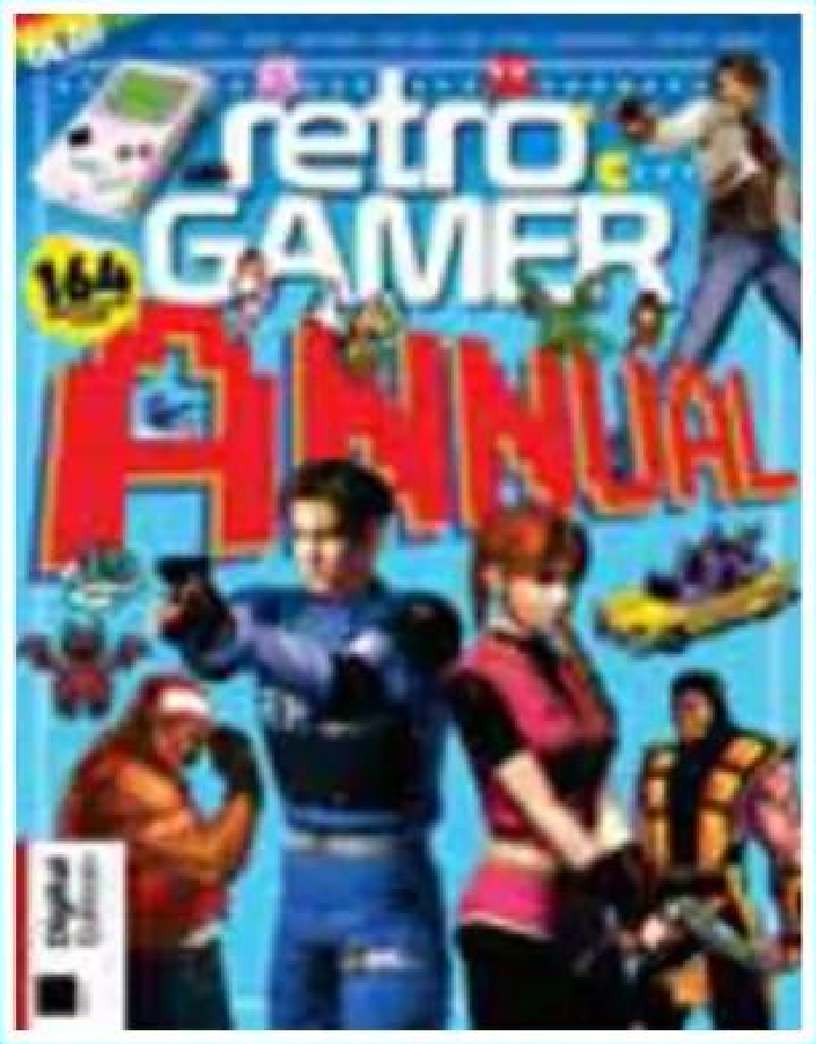

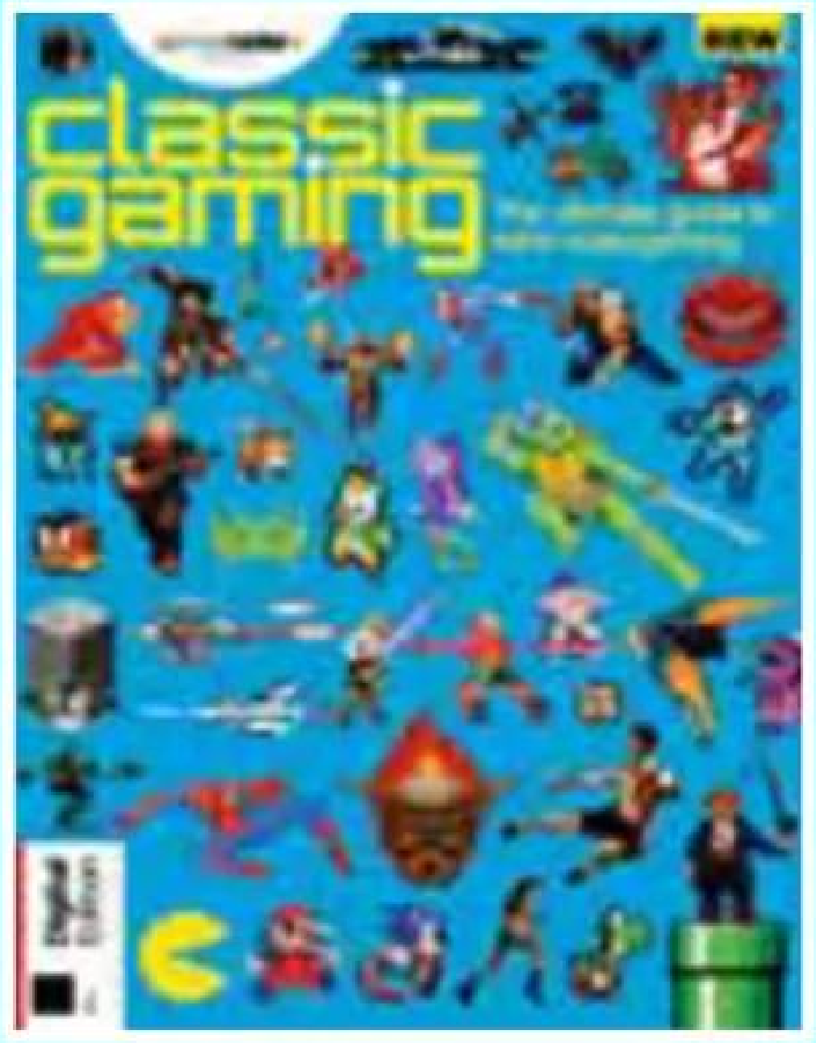

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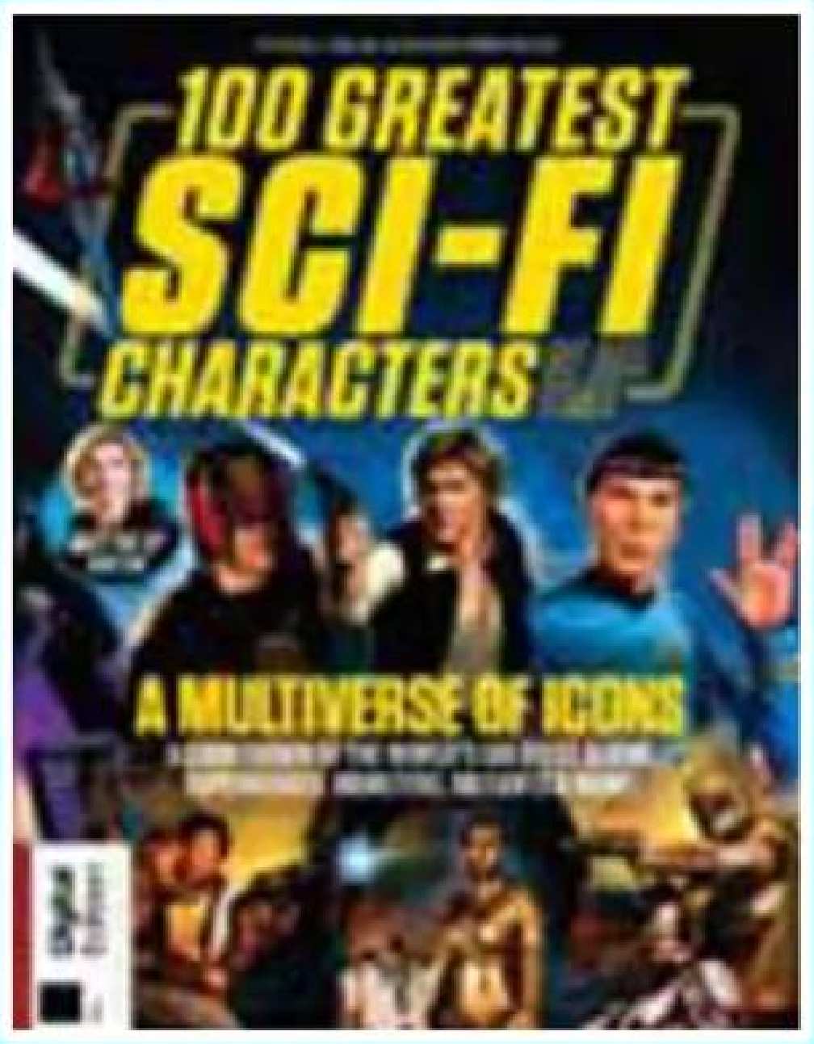

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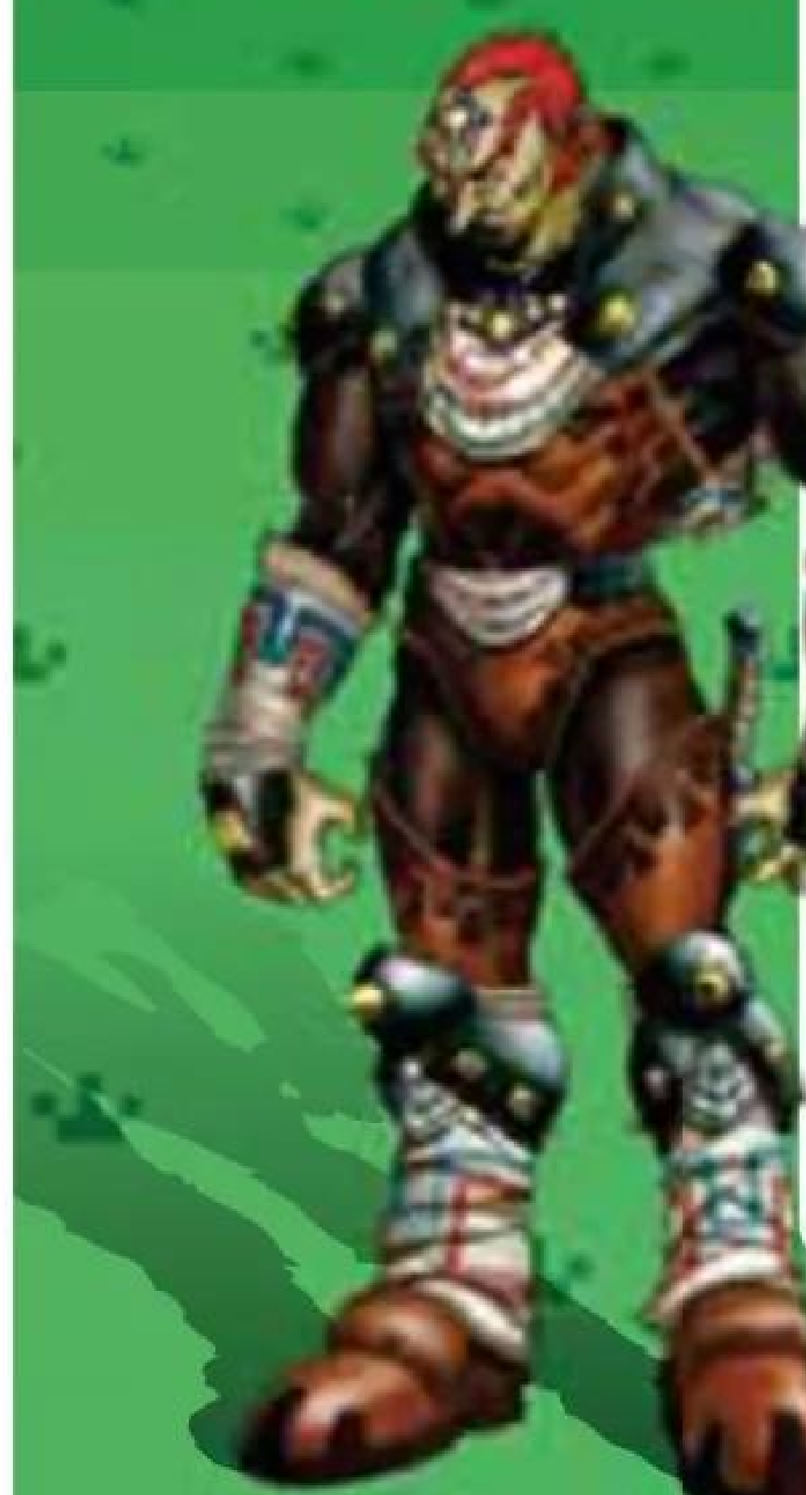

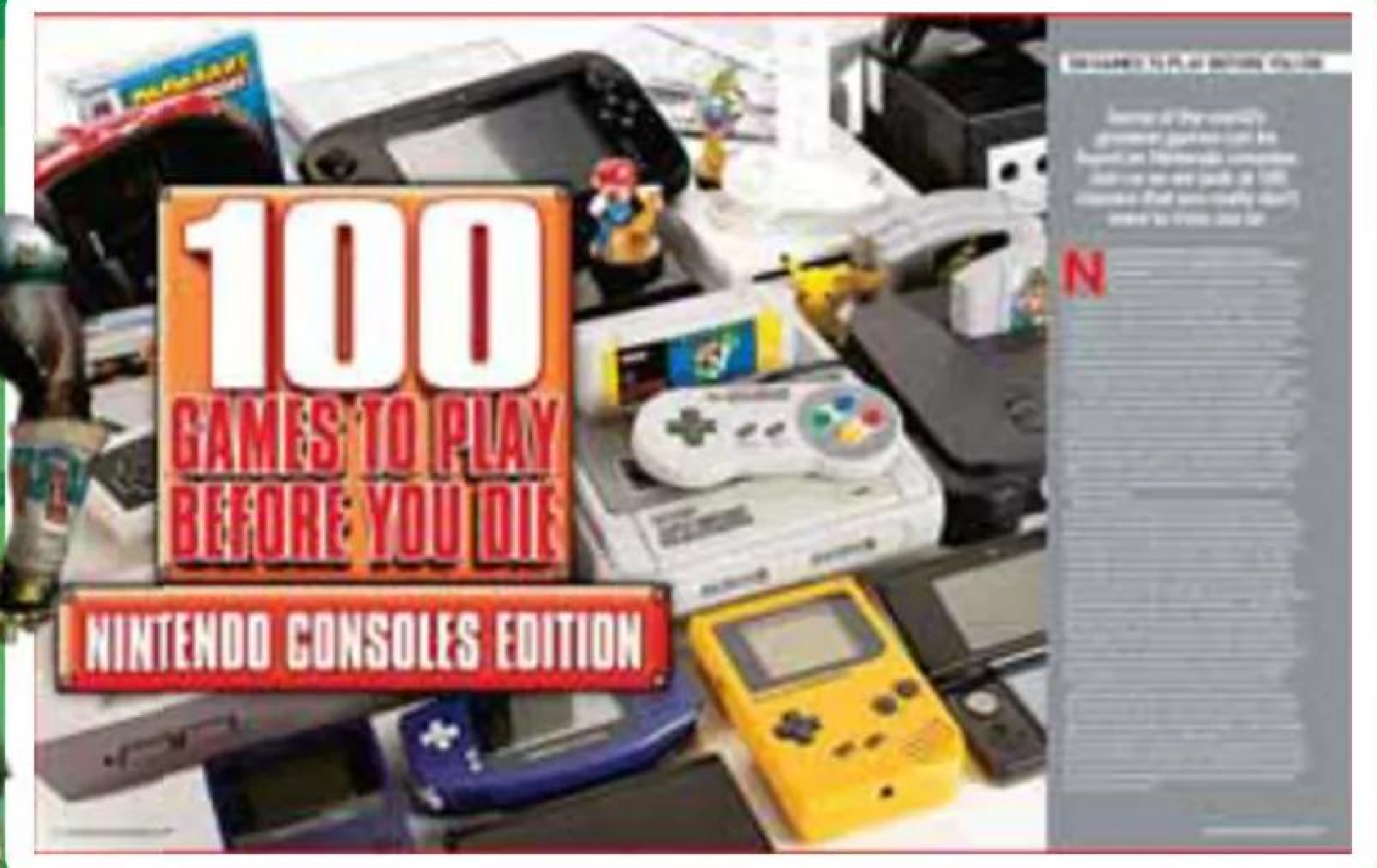

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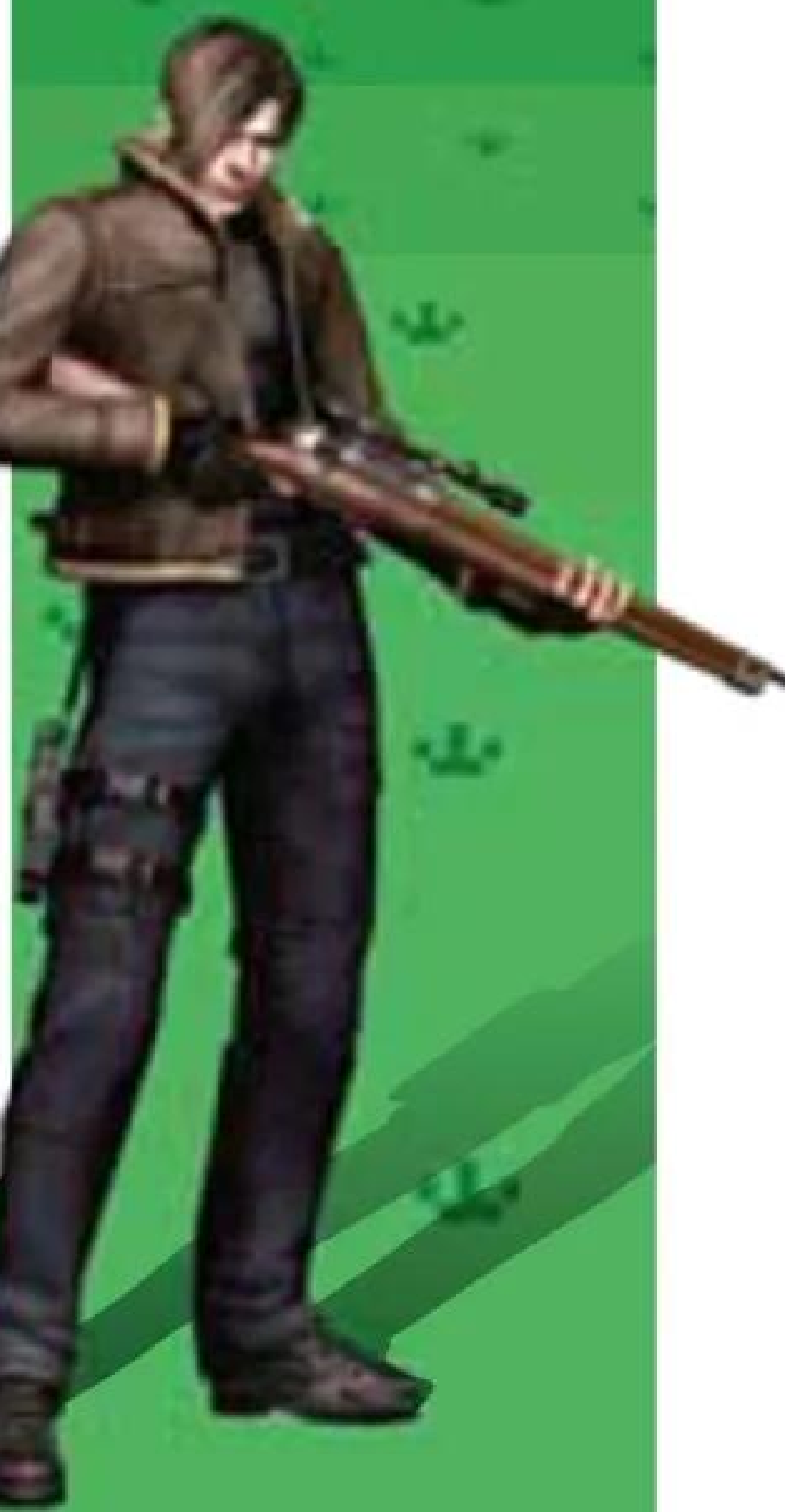

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